United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
N	RIR040007	110323	R	J	1

Remarks:

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
1.0				

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NDPES permit number)
Various locations
North Providence, RI

Entry Time/Date: **10:15 AM**
Permit Effective Date:
Exit Time/Date: **3:00 PM**
Permit Expiration Date:

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
No representatives present or notified

Other Facility Data

Name, Address of responsible Official/Title/Phone and Fax Number.

Contacted: [ ] Yes [X] No

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

[ ] Permit	[ ] Self-Monitoring Program	[ ] Pretreatment	[ ] MS4
[ ] Records/Reports	[ ] Compliance Schedules	[ ] Pollution Preven ion	
[ ] Facility Site Review	[ ] Laboratory	[X] Storm Water	
[ ] Effluent/Receiving Waters	[ ] Operations & Maintenance	[ ] Combined Sewer Overflow	
[ ] Flow Measurement	[ ] Sludge Handling/Disposal	[ ] Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments (Attach additional sheets of narrative and checklists as necessary)

Unannounced reconnaissance of stormwater discharge locations. Flowing stormwater pipes are being evaluated for potential future compliance sampling inspections. Inspectors participating: David Turin, EPA; Alex Rosenberg, EPA; Alex Pinto, RI DEM.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**03/24/2011**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
N	RIR040007	12/5/31	R	R	1

Remarks

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
1.0				

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NDPES permit number)
Various locations
North Providence, RI

Entry Time/Date: **1:00 PM**
Permit Effective Date:
Exit Time/Date: **1:30 PM**
Permit Expiration Date:

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
No representatives present or notified

Other Facility Data

Name, Address of responsible Official/Title/Phone and Fax Number.

Contacted: [ ] Yes [X] No

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

[ ] Permit	[ ] Self-Monitoring Program	[ ] Pretreatment	[X] MS4
[ ] Records/Reports	[ ] Compliance Schedules	[ ] Pollution Preven ion	
[ ] Facility Site Review	[ ] Laboratory	[X] Storm Water	
[X] Effluent/Receiving Waters	[ ] Operations & Maintenance	[ ] Combined Sewer Overflow	
[ ] Flow Measurement	[ ] Sludge Handling/Disposal	[ ] Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments (Attach additional sheets of narrative and checklists as necessary)

Unannounced reconnaissance of stormwater discharge locations. Sites inspected: Gillen St; Pearl St. Test strip screening for Chlorine and Total Phosphorus was performed at 3 discharge pipes at Gillen St; all test results were zero. Pearl Street was not discharging.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**06/07/2012**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
N	RIR040007	110623	R	R	1

Remarks

Inspection Work Days: 1.0 | Facility Self-Monitoring Evaluation Rating: | B1: | QA: | Reserved:

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NDPES permit number)	Entry Time/Date	Permit Effective Date
Various locations **North Providence, RI**	**10:15 AM**	
	Exit Time/Date **3:00 PM**	Permit Expiration Date

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
No representatives present or notified

Other Facility Data

Name, Address of responsible Official/Title/Phone and Fax Number.

Contacted: [ ] Yes [X] No

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

[ ] Permit	[ ] Self-Monitoring Program	[ ] Pretreatment	[X] MS4
[ ] Records/Reports	[ ] Compliance Schedules	[ ] Pollution Preven ion	
[ ] Facility Site Review	[ ] Laboratory	[X] Storm Water	
[X] Effluent/Receiving Waters	[ ] Operations & Maintenance	[ ] Combined Sewer Overflow	
[ ] Flow Measurement	[ ] Sludge Handling/Disposal	[ ] Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments (Attach additional sheets of narrative and checklists as necessary)

Unannounced reconnaissance of stormwater discharge locations. Flowing stormwater pipes are being evaluated for potential future compliance sampling inspections.
Inspectors participating: David Turin, EPA; Erin Trainer, EPA.
Sites evaluated: Gillen St. and Randall St; Stop and Shop parking lot (Mineral Spring Ave); Washington St; Pearl St; Hopkins Manor, 610 Smithfield St; Governor Notte Park.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**06/27/2011**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
N	RIR040007	11/8/2015	R	R	1

Remarks

Inspec ion Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
1.0				

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NDPES permit number)	Entry Time/Date	Permit Effective Date
Various locations **North Providence, RI**	**10:00 AM**	
	Exit Time/Date **3:00 PM**	Permit Expiration Date

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
No representatives present or notified

Other Facility Data

Name, Address of responsible Official/Title/Phone and Fax Number.

Contacted
[ ] Yes [X] No

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

[ ] Permit	[ ] Self-Monitoring Program	[ ] Pretreatment	[X] MS4
[ ] Records/Reports	[ ] Compliance Schedules	[ ] Pollution Preven ion	
[ ] Facility Site Review	[ ] Laboratory	[X] Storm Water	
[ ] Effluent/Receiving Waters	[ ] Operations & Maintenance	[ ] Combined Sewer Overflow	
[ ] Flow Measurement	[ ] Sludge Handling/Disposal	[ ] Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments (Attach additional sheets of narrative and checklists as necessary)

Unannounced reconnaissance of stormwater discharge locations. Flowing stormwater pipes are being evaluated for potential future compliance sampling inspections.
EPA Inspectors participating: David Turin and Erin Trainer.
Sites evaluated: Stop and Shop parking lot (Mineral Spring Ave); Vulturno St; Gillen St; Jane St; Aldritch St; Woonasquatucket Ave @ Allandale Apts; and Woonasquatucket Ave and Falco St. Heavy rain throughout day; moderate to high flow volumes from all of the assessed discharge pipes. Follow-up meeting with Peter Naumann of DEM, who is helping us coordinate bacteria sample analysis by RI DOH of samples to be collected on 8/16/11.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**08/17/2011**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

North Providence

Stormwater Sampling
August 16, 2011

Inspectors:

David Turin

Erin Trainor

Pearl Street (IDDE Report: Discharge No. 010)

Falco Street (IDDE Outfall No. 014)

Gillen Street (From left to right:
IDDE Outfall No. 005 A, B, C)

Gillen Street (IDDE Outfall No. 005 C)

Vulturno Street (IDDE Outfall No. 001)

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
N	RIR040007	11/08/16	<	R	1

Remarks

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
1.0				

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NDPES permit number)	Entry Time/Date	Permit Effective Date
Various locations **North Providence, RI**	**8:30 AM**	
	Exit Time/Date **1:00 PM**	Permit Expiration Date

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
No representatives present or notified

Other Facility Data

Name, Address of responsible Official/Title/Phone and Fax Number.

Contacted
[ ] Yes [X] No

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

[ ] Permit	[ ] Self-Monitoring Program	[ ] Pretreatment	[X] MS4
[ ] Records/Reports	[ ] Compliance Schedules	[ ] Pollution Preven ion	
[ ] Facility Site Review	[ ] Laboratory	[X] Storm Water	
[ ] Effluent/Receiving Waters	[ ] Operations & Maintenance	[ ] Combined Sewer Overflow	
[ ] Flow Measurement	[ ] Sludge Handling/Disposal	[ ] Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments (Attach additional sheets of narrative and checklists as necessary)

Unannounced stormwater MS4 sampling inspection. EPA Inspectors participating: David Turin and Erin Trainer.
Sites sampled: Vulturno St; Gillen St; Woonasquatucket Ave @ Allandale Apts; and Woonasquatucket Ave and Falco St. Partly sunny, temp. mid-60s throughout day. Samples analyzed on-site for NH3, surfactants, and TRC; samples sent to RI DOH lab for fecal coliform and enterococci; samples sent to OAME for pharmaceutical analysis. See inspection report.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**08/17/2011**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
N	RIR040007	11/11/16	<	R	1

Remarks

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
1.0				

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NDPES permit number)	Entry Time/Date	Permit Effective Date
Various locations **North Providence, RI**	**8:15 AM**	
	Exit Time/Date **12:45 PM**	Permit Expiration Date

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
No representatives present or notified

Other Facility Data

Name, Address of responsible Official/Title/Phone and Fax Number.

Contacted
[ ] Yes [X] No

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

[ ] Permit	[ ] Self-Monitoring Program	[ ] Pretreatment	[X] MS4
[ ] Records/Reports	[ ] Compliance Schedules	[ ] Pollution Preven ion	
[ ] Facility Site Review	[ ] Laboratory	[X] Storm Water	
[ ] Effluent/Receiving Waters	[ ] Operations & Maintenance	[ ] Combined Sewer Overflow	
[ ] Flow Measurement	[ ] Sludge Handling/Disposal	[ ] Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments (Attach additional sheets of narrative and checklists as necessary)

Unannounced stormwater MS4 sampling inspection. Various locations -- see inspection report.
EPA Inspectors participating: David Turin and Todd Borci.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**11/22/2011**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
N	RIR040007	11/11/16	<	R	1

Remarks

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
1.0				

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NDPES permit number)	Entry Time/Date	Permit Effective Date
Various locations **North Providence, RI**	**8:15 AM**	
	Exit Time/Date **12:45 PM**	Permit Expiration Date

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
No representatives present or notified

Other Facility Data

Name, Address of responsible Official/Title/Phone and Fax Number.

Contacted
[ ] Yes [X] No

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

[ ] Permit	[ ] Self-Monitoring Program	[ ] Pretreatment	[X] MS4
[ ] Records/Reports	[ ] Compliance Schedules	[ ] Pollution Preven ion	
[ ] Facility Site Review	[ ] Laboratory	[X] Storm Water	
[ ] Effluent/Receiving Waters	[ ] Operations & Maintenance	[ ] Combined Sewer Overflow	
[ ] Flow Measurement	[ ] Sludge Handling/Disposal	[ ] Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments (Attach additional sheets of narrative and checklists as necessary)

Unannounced stormwater MS4 sampling inspection. Various locations -- see inspection report.
EPA Inspectors participating: David Turin and Todd Borci.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**11/22/2011**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

Inspection Conclusion Data Sheet (ICDS)

FY2011

Inspector:_David Turin_____

Inspection Date: ___March 23, 2011_____

Facility Name/Address: ____North Providence, various locations
_____

Facility Manager/Title and Address (if different from facility address): ____Reconnaissance - no one contacted _____
_____

Facility Contact/Title and Address (if different from facility address):_____
_____

1. Media Type: (Check one)

□ CAA-Stationary □ CAA-Mobile Source □ CAA-112r
□ CAA-NESHAP
□ CWA-NPDES □ CWA-Pretreatment POTW □ CWA-Pretreatment IU
□ CWA 311 □ CWA 404 : CWA-Stormwater
□ EPCRA 313 □ EPCRA N313
□ RCRA-C □ RCRA-I
□ SDWA-UIC □ SDWA-PWSS
□ TSCA-Lead Paint □ TSCA-PCBs □ TSCA-Core □ TSCA-AHERA

2. Did you observe deficiencies (potential violations) during the inspection?

: Yes □ No

3. If you observed deficiencies, did you communicate them to the facility during the inspection?

□ Yes : No

4. Deficiencies observed?

_____ Potential violation of a compliance schedule in an enforceable order.

_____ Potential failure to maintain a record or failure to disclose a document.

_____ Potential failure to maintain, inspect or repair equipment including meters, sensors, and recording equipment.

_____ Potential failure to complete or submit a notification, report, certification, or manifest.

_____ Potential failure to obtain a permit, product approval, or certification.

_____ Potential failure to follow a required sampling or monitoring procedure or laboratory procedure.

_____ Potential failure to follow or develop a required management practice or procedure.

__X__ Potential failure to identify and manage a regulated waste or pollutant in any media.

_____ Potential failure to report regulated events such as spills, accidents, etc.

_____ Potential incorrect use of a material (e.g., pesticide, waste, product, etc.) or use of improper or unapproved material.

_____ Potential failure to follow a permit condition(s).

5 Did you observe or see the facility take any actions during the inspection to address the deficiencies communicated to the facility?

□ Yes □ No : N/A only if #3 was NO.

If YES, check only the action(s) actually observed/seen or write in a short description of the action in the "optional" section. (Check all that apply)

Action(s) taken

_____ Complete(d) a Notification or Report

_____ Correct(ed) Monitoring Deficiencies

_____ Correct(ed) Record Keeping Deficiencies

_____ Implemented New or Improved Management Practices or Procedures

_____ Improved Pollutant Identification (e.g., Labeling, Manifesting, Storage, etc.)

_____ Reduced Pollution (e.g., Use Reduction, Industrial Process Change, Emissions or Discharge Change, etc.)

_____ Request(ed) a Permit Application or Applied for a Permit

_____ Verified Compliance with Previously Issued Enforcement Action - Part or All Conditions

The following common air or water pollutant(s) **should only be checked** if the "Reduced Pollution" line was checked.

Water: 9 Ammonia 9BOD 9COD 9TSS 9O/G 9Total Coliform 9D.O.
9 Metals 9Cyanide 9 Other_____

Air: 9NOx 9SO2 9PM 9VOC 9Metals 9HAPs 9CO
9Other_____

6. Did you provide general compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

7. Did you provide site-specific compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

Optional Additional Information: EPA inspectors may wish to provide a narrative description of actions taken by the facility or assistance to help the facility come into compliance. (Narratives may be used in national or regional reports to provide examples of EPA inspection outcomes).

_____ Unannounced reconnaissance of stormwater discharge locations. Flowing stormwater pipes are being evaluated for potential future compliance sampling. Inspectors participating: David Turin, EPA; Alex Rosenberg, EPA; Alex Pinto, RI DEM.

Inspection Conclusion Data Sheet (ICDS)

FY2011

Inspector:_David Turin_____

Inspection Date: ___June 23, 2011_____

Facility Name/Address: ____North Providence, various locations
_____

Facility Manager/Title and Address (if different from facility address): ____Reconnaissance - no one contacted _____
_____

Facility Contact/Title and Address (if different from facility address):_____
_____

1. Media Type: (Check one)

□ CAA-Stationary □ CAA-Mobile Source □ CAA-112r
□ CAA-NESHAP
□ CWA-NPDES □ CWA-Pretreatment POTW □ CWA-Pretreatment IU
□ CWA 311 □ CWA 404 : CWA-Stormwater
□ EPCRA 313 □ EPCRA N313
□ RCRA-C □ RCRA-I
□ SDWA-UIC □ SDWA-PWSS
□ TSCA-Lead Paint □ TSCA-PCBs □ TSCA-Core □ TSCA-AHERA

2. Did you observe deficiencies (potential violations) during the inspection?

: Yes □ No

3. If you observed deficiencies, did you communicate them to the facility during the inspection?

□ Yes : No

4. Deficiencies observed?

_____ Potential violation of a compliance schedule in an enforceable order.

_____ Potential failure to maintain a record or failure to disclose a document.

_____ Potential failure to maintain, inspect or repair equipment including meters, sensors, and recording equipment.

_____ Potential failure to complete or submit a notification, report, certification, or manifest.

_____ Potential failure to obtain a permit, product approval, or certification.

_____ Potential failure to follow a required sampling or monitoring procedure or laboratory procedure.

_____ Potential failure to follow or develop a required management practice or procedure.

__X__ Potential failure to identify and manage a regulated waste or pollutant in any media.

_____ Potential failure to report regulated events such as spills, accidents, etc.

_____ Potential incorrect use of a material (e.g., pesticide, waste, product, etc.) or use of improper or unapproved material.

_____ Potential failure to follow a permit condition(s).

5 Did you observe or see the facility take any actions during the inspection to address the deficiencies communicated to the facility?

□ Yes □ No : N/A only if #3 was NO.

If YES, check only the action(s) actually observed/seen or write in a short description of the action in the "optional" section. (Check all that apply)

Action(s) taken

_____ Complete(d) a Notification or Report

_____ Correct(ed) Monitoring Deficiencies

_____ Correct(ed) Record Keeping Deficiencies

_____ Implemented New or Improved Management Practices or Procedures

_____ Improved Pollutant Identification (e.g., Labeling, Manifesting, Storage, etc.)

_____ Reduced Pollution (e.g., Use Reduction, Industrial Process Change, Emissions or Discharge Change, etc.)

_____ Request(ed) a Permit Application or Applied for a Permit

_____ Verified Compliance with Previously Issued Enforcement Action - Part or All Conditions

The following common air or water pollutant(s) **should only be checked** if the "Reduced Pollution" line was checked.

Water: 9 Ammonia 9BOD 9COD 9TSS 9O/G 9Total Coliform 9D.O.
9 Metals 9Cyanide 9 Other_____

Air: 9NOx 9SO2 9PM 9VOC 9Metals 9HAPs 9CO
9Other_____

6. Did you provide general compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

7. Did you provide site-specific compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

Optional Additional Information: EPA inspectors may wish to provide a narrative description of actions taken by the facility or assistance to help the facility come into compliance. (Narratives may be used in national or regional reports to provide examples of EPA inspection outcomes).

_____ Unannounced reconnaissance of stormwater discharge locations. Flowing stormwater pipes are being evaluated for potential future compliance sampling inspections. Inspectors participating: David Turin, EPA; Erin Trainer, EPA.
Sites evaluated: Gillen St. and Randall St; Stop and Shop parking lot (Mineral Spring Ave); Washington St; Pearl St; Hopkins Manor, 610 Smithfield St; Governor Notte Park.
_____

_____

_____

_____

_____

Inspection Conclusion Data Sheet (ICDS)

FY2011

Inspector:_David Turin_____

Inspection Date: ___August 15, 2011_____

Facility Name/Address: ____North Providence, various locations
_____

Facility Manager/Title and Address (if different from facility address): ____Reconnaissance - no one contacted _____
_____

Facility Contact/Title and Address (if different from facility address):_____
_____

1. Media Type: (Check one)

□ CAA-Stationary □ CAA-Mobile Source □ CAA-112r
□ CAA-NESHAP
□ CWA-NPDES □ CWA-Pretreatment POTW □ CWA-Pretreatment IU
□ CWA 311 □ CWA 404 : CWA-Stormwater
□ EPCRA 313 □ EPCRA N313
□ RCRA-C □ RCRA-I
□ SDWA-UIC □ SDWA-PWSS
□ TSCA-Lead Paint □ TSCA-PCBs □ TSCA-Core □ TSCA-AHERA

2. Did you observe deficiencies (potential violations) during the inspection?

□ Yes : No

3. If you observed deficiencies, did you communicate them to the facility during the inspection?

□ Yes □ No

4. Deficiencies observed?

_____ Potential violation of a compliance schedule in an enforceable order.

_____ Potential failure to maintain a record or failure to disclose a document.

_____ Potential failure to maintain, inspect or repair equipment including meters, sensors, and recording equipment.

_____ Potential failure to complete or submit a notification, report, certification, or manifest.

_____Potential failure to obtain a permit, product approval, or certification.

_____ Potential failure to follow a required sampling or monitoring procedure or laboratory procedure.

_____ Potential failure to follow or develop a required management practice or procedure.

_____Potential failure to identify and manage a regulated waste or pollutant in any media.

_____ Potential failure to report regulated events such as spills, accidents, etc.

_____ Potential incorrect use of a material (e.g., pesticide, waste, product, etc.) or use of improper or unapproved material.

_____ Potential failure to follow a permit condition(s).

5 Did you observe or see the facility take any actions during the inspection to address the deficiencies communicated to the facility?

□ Yes □ No : N/A only if #3 was NO.

If YES, check only the action(s) actually observed/seen or write in a short description of the action in the "optional" section. (Check all that apply)

Action(s) taken

_____ Complete(d) a Notification or Report

_____ Correct(ed) Monitoring Deficiencies

_____ Correct(ed) Record Keeping Deficiencies

_____ Implemented New or Improved Management Practices or Procedures

_____ Improved Pollutant Identification (e.g., Labeling, Manifesting, Storage, etc.)

_____ Reduced Pollution (e.g., Use Reduction, Industrial Process Change, Emissions or Discharge Change, etc.)

_____ Request(ed) a Permit Application or Applied for a Permit

_____ Verified Compliance with Previously Issued Enforcement Action - Part or All Conditions

The following common air or water pollutant(s) **should only be checked** if the "Reduced Pollution" line was checked.

Water: 9 Ammonia 9BOD 9COD 9TSS 9O/G 9Total Coliform 9D.O.
9 Metals 9Cyanide 9 Other_____

Air: 9NOx 9SO2 9PM 9VOC 9Metals 9HAPs 9CO
9Other_____

6. Did you provide general compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

7. Did you provide site-specific compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

Optional Additional Information: EPA inspectors may wish to provide a narrative description of actions taken by the facility or assistance to help the facility come into compliance. (Narratives may be used in national or regional reports to provide examples of EPA inspection outcomes).

Unannounced reconnaissance of stormwater discharge locations. Flowing stormwater pipes are being evaluated for potential future compliance sampling inspections. EPA Inspectors participating: David Turin and Erin Trainer. Sites evaluated: Stop and Shop parking lot (Mineral Spring Ave); Vulturno St; Gillen St; Jane St; Aldritch St; Woonasquatucket Ave @ Allandale Apts; and Woonasquatucket Ave and Falco St. Heavy rain throughout day; moderate to high flow volumes from all of the assessed discharge pipes. Follow-up meeting with Peter Naumann of DEM, who is helping us coordinate bacteria sample analysis by RI DOH of samples to be collected on 8/16/11.

Inspection Conclusion Data Sheet (ICDS)

FY2011

Inspector:_David Turin_____

Inspection Date: ___August 15, 2011_____

Facility Name/Address: ____North Providence, various locations
_____

Facility Manager/Title and Address (if different from facility address): ____Reconnaissance - no one contacted _____
_____

Facility Contact/Title and Address (if different from facility address):_____
_____

1. Media Type: (Check one)

□ CAA-Stationary □ CAA-Mobile Source □ CAA-112r
□ CAA-NESHAP
□ CWA-NPDES □ CWA-Pretreatment POTW □ CWA-Pretreatment IU
□ CWA 311 □ CWA 404 : CWA-Stormwater
□ EPCRA 313 □ EPCRA N313
□ RCRA-C □ RCRA-I
□ SDWA-UIC □ SDWA-PWSS
□ TSCA-Lead Paint □ TSCA-PCBs □ TSCA-Core □ TSCA-AHERA

2. Did you observe deficiencies (potential violations) during the inspection?

: Yes □No

3. If you observed deficiencies, did you communicate them to the facility during the inspection?

□ Yes : No

4. Deficiencies observed?

_____ Potential violation of a compliance schedule in an enforceable order.

_____ Potential failure to maintain a record or failure to disclose a document.

_____ Potential failure to maintain, inspect or repair equipment including meters, sensors, and recording equipment.

_____ Potential failure to complete or submit a notification, report, certification, or manifest.

__X__Potential failure to obtain a permit, product approval, or certification.

_____ Potential failure to follow a required sampling or monitoring procedure or laboratory procedure.

_____ Potential failure to follow or develop a required management practice or procedure.

__X__Potential failure to identify and manage a regulated waste or pollutant in any media.

_____ Potential failure to report regulated events such as spills, accidents, etc.

_____ Potential incorrect use of a material (e.g., pesticide, waste, product, etc.) or use of improper or unapproved material.

_____ Potential failure to follow a permit condition(s).

5 Did you observe or see the facility take any actions during the inspection to address the deficiencies communicated to the facility?

□ Yes □ No : N/A only if #3 was NO.

If YES, check only the action(s) actually observed/seen or write in a short description of the action in the "optional" section. (Check all that apply)

Action(s) taken

_____ Complete(d) a Notification or Report

_____ Correct(ed) Monitoring Deficiencies

_____ Correct(ed) Record Keeping Deficiencies

_____ Implemented New or Improved Management Practices or Procedures

_____ Improved Pollutant Identification (e.g., Labeling, Manifesting, Storage, etc.)

_____ Reduced Pollution (e.g., Use Reduction, Industrial Process Change, Emissions or Discharge Change, etc.)

_____ Request(ed) a Permit Application or Applied for a Permit

_____ Verified Compliance with Previously Issued Enforcement Action - Part or All Conditions

The following common air or water pollutant(s) **should only be checked** if the "Reduced Pollution" line was checked.

Water: 9 Ammonia 9BOD 9COD 9TSS 9O/G 9Total Coliform 9D.O.
9 Metals 9Cyanide 9 Other_____

Air: 9NOx 9SO2 9PM 9VOC 9Metals 9HAPs 9CO
9Other_____

6. Did you provide general compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

7. Did you provide site-specific compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

Optional Additional Information: EPA inspectors may wish to provide a narrative description of actions taken by the facility or assistance to help the facility come into compliance. (Narratives may be used in national or regional reports to provide examples of EPA inspection outcomes).

Unannounced stormwater MS4 sampling inspection. EPA Inspectors participating: David Turin and Erin Trainer.
Sites sampled: Vulturno St; Gillen St; Woonasquatucket Ave @ Allandale Apts; and Woonasquatucket Ave and Falco St. Partly sunny, temp. mid-60s throughout day. Samples analyzed on-site for NH3, surfactants, and TRC; samples sent to RI DOH lab for fecal coliform and enterococci; samples sent to OAME for pharmaceutical analysis. See inspection report.

EPA Region 1
Clean Water Act
Inspection Data Entry Form: 3560EZ

Inspector:	Erin Trainor	Date form completed:	9/18/2013

Section A: Facility Information						
Inspection start date:	9/17/2013	Inspection end date (if more than one day):	9/17/2013			
NPDES ID:	RIR040000	Federal facility?	No			
Name and Location of Facility Inspected:						
Name:	Town of North Providence, RI MS4					
Address:	Various MS4 catch basins and outfalls					
City:	North Providence	State:	RI	ZIP:	02911	
Facility On-Site Representative #1:						
Name:	Enter text					
Title:	Enter text					
Phone #:	Enter text	Fax # / email:	Enter text			
Facility On-Site Representative #2 (if necessary):						
Name:	Enter text					
Title:	Enter text					
Phone #:	Enter text	Fax # / email:	Enter text			

Section B: Compliance Monitoring Information	
Compliance Monitoring Activity Name:	Recon
Clean Water Act Section (choose from only one of the following):	
CWA §308[A][B]: NPDES	Stormwater - MS4
CWA §311: Oil and Hazardous Substances	Choose an item
CWA §404: Permits for Dredge and Fill Material	Choose an item
Compliance Monitoring Type:	Reconnaissance
Compliance Monitoring Reason:	Agency Priority

If Agency Priority, then specify priority(s):

OECA - CAFO	☐
OECA - CAFO Region Initiative Areas	☐
OECA - CSOs w/ < 50,000 service population	☐
OECA - CSOs w/ >= 50,000 service population	☐
OECA - MS4s Phase I	☐
OECA - MS4s Phase II	☒
Region 1 - Environmental Justice	☐
Region 1 - Green Economy / Green Infrastructure	☐
Region 1 - Industrial Laundries	☐
Region 1 - Lead Poisoning	☐
Region 1 - Municipal Infrastructure	☐

Region 1 - Pollution Prevention & Resource Conservation	☐
Region 1 - Ship / Boat Yards	☐
Region 1 - Wet Weather	☐

Compliance Monitoring Agency Type:	EPA
Was this a Joint Compliance Monitoring Activity?	No
Which party had the lead?	Choose an item or leave blank if N/A
If State lead, what was the purpose of EPA participation?	Choose an item or leave blank if N/A

Section C: ICDS Information	
Did you observe deficiencies (potential violations) during the inspection?	Yes
Potential excess emission in violation of regulations:	☐
Potential failure to… … complete or submit a notification, report, certification, or manifest:	☐
… follow a permit condition(s):	☐
… follow a required sample monitoring procedure or laboratory procedure:	☐
… follow or develop a required management practice or procedure:	☐
… identify and manage a regulated waste or pollutant in any media:	☒
… maintain a record or failure to disclose a document:	☐
… maintain/inspect/repair meters, sensors, and recording equipment:	☐
… obtain a permit, product approval, or certification:	☐
… report regulated events such as spills, accidents, etc.:	☐
Potential incorrect use of a material (pesticide, waste, product) or use of an unapproved material:	☐
Potential violation of a compliance schedule in an enforceable order:	☐
If you observed deficiencies, did you communicate the deficiencies to the Facility during the inspection?	No
If yes, did you observe the Facility take any actions during the inspection to address the deficiencies noted?	Choose an item
If yes, what actions were taken?	Choose an item
If the Facility reduced pollution, what pollutant was reduced?	Enter text
Did you provide general compliance assistance in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No
Did you provide site-specific compliance assistance in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No

Comments:

A reconnaissance was conducted to locate potential sample locations in an upcoming MS4 sampling inspection.

North Providence – Follow-up PPCP Sampling
Tentatively scheduled for Nov 9, 2011

Potential sampling stations:

1. Pearl Av (010)
2. Stream btw David and Spicer Sts (access from David St, behind bar and grill on Mineral Sp)
3. Stream btw Milton and Rosedale Sts, at Fruit Hill Av, op. RI College
4. Outfall nr end of driveway onWoonasquatucket Av, to left and opp. Metcalf Av, if found
5. Culverts behind Peter Blackburne, Inc, nr Falco St (014 A),
6. And Falco St (014 B) , if both pipes flowing
7. Behind Cumberland Farms @ Smith St and Rt 104, if flowing
8. Mill St, behind post office or between P.O. and Steere Av, if found
9. Brook Farm Rd (019), nr Douglas Av (Rt 7)
10. Obed St (003), off Charles St, if flowing
11. Culverts under Mineral Spring Av, if accessible
12. Gillen Av (005 C)
13. Gillen Ave (005 A, if flowing)

North Providence – Follow-up PPCP Sampling
Tentatively scheduled for Nov 9, 2011

Potential sampling stations:

1. Pearl Av (010)
2. Stream btw David and Spicer Sts (access from David St, behind bar and grill on Mineral Sp)
3. Stream btw Milton and Rosedale Sts, at Fruit Hill Av, op. RI College
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5. Culverts behind Peter Blackburne, Inc, nr Falco St (014 A),
6. And Falco St (014 B) , if both pipes flowing
7. Behind Cumberland Farms @ Smith St and Rt 104, if flowing
8. Mill St, behind post office or between P.O. and Steere Av, if found
9. Brook Farm Rd (019), nr Douglas Av (Rt 7)
10. Obed St (003), off Charles St, if flowing
11. Culverts under Mineral Spring Av, if accessible
12. Gillen Av (005 C)
13. Gillen Ave (005 A, if flowing)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I

DATE: October 18, 2013

SUBJ: MS4 Reconnaissance Inspection
Town of North Providence, Rhode Island

FROM: Erin Trainor, Inspector

TO: File

REQUESTED BY: Dave Turin (OES)

I. Background Information

A. Date, Time of inspection: Tuesday, September 17, 2013, 12:00 PM

B. Weather Conditions: Sunny, approximately 60 degrees F

C. USEPA Representatives: Erin Trainor
David Turin
Denny Dart

D. Site Representative(s): Glenn J. Corrente
Department of Public Works
2 Mafalda Street
North Providence, RI 02904
Telephone: (401) 233-1440
Fax: (401) 233-1442

Note: The Site Representative was not contacted.

E. Address: Various locations associated with the outfall located at 457 Woonasquatucket Avenue as well as areas along Kristen Drive and Gillen Avenue within the Town of North Providence, Rhode Island municipal separate storm sewer system (MS4).

II. Purpose of Inspection

The purpose of the inspection was to locate potential sample areas which were identified by the Municipal Mapping Assistance Program as areas with possible illicit connections or illegal discharges that may adversely impact the water quality in the Woonasquatucket River.

III. Inspection Observations and Findings

On Tuesday, September 17, 2013, EPA inspectors David Turin, Denny Dart, and Erin Trainor met with Jennifer Stout and Eric Beck of Rhode Island Department of Environmental Management (RIDEM). Inspectors reviewed areas assessed by the Municipal Mapping Assistance Program which were recommend to EPA as potential areas to sample within the Town of North Providence based on observations collected over the course of summer 2013. Inspectors then conducted a reconnaissance inspection within the Town of North Providence at locations associated with the outfall identified as "priority outfall" located at 457 Woonasquatucket Avenue, as well as areas along Kristen Drive and Gillen Avenue.

The inspectors met with RIDEM personnel at 08:40, and the inspection started in North Providence at 12:00 PM. At the time of the inspection the weather was sunny and approximately 60 degrees Fahrenheit. According to weather underground, a rain event rain event of 0.08 inches was reported on September 16, 2013 in Providence, Rhode Island. Photographs are included at the end of this report.

End of Report

Attachments: Photographs

"Priority outfall" located at 457 Woonasquatucket Avenue. The outfall depicted on the left measures approximately 36 inches in diameter, the outfall depicted in the middle measures approximately 8 inches in diameter, and the outfall depicted on the right measures approximately 48 inches in diameter.

Paper observed downstream of the "priority outfall".

Catch basin along Woonasquatucket Avenue which leads to the 48 inch outfall at the "priority outfall". Running water was heard at catch basin.

Access manhole that leads to 36 inch outfall at the "priority outfall".

Catch basin and access manhole located at 25 Whipple Road, upstream of the "priority outfall". A trickle was heard upstream.

Catch basin located along Sampson Avenue, upstream of the "priority outfall".

Close up of standing water within catch basin located along Sampson Avenue.

View of standing water located within catch basin in front of 11 Kristen Drive.

Three outfalls located along Gillen Avenue. Note: the outfall depicted on the right has had historical contamination documented by EPA in 2011, identified as "005C".

Paper observed downstream of outfall "005C".

MUNICIPAL STORMWATER SEWER SYSTEM
NORTH PROVIDENCE, RHODE ISLAND

Sampling of Stormwater Outfalls for
Bacteria and Pharmaceuticals and Personal Care Products

Sampling & Analysis Plan (SAP)
August 2011

U.S. Environmental Protection Agency
EPA New England
Office of Environmental Measurement & Evaluation
Environmental Investigations & Analysis Unit

Project Manager: Dave Turin

Signature: _____ Date: _____

EIA Field Sampling Leader: Erin Trainor

Signature: _____ Date: 8/12/2011

EIA Field Team Leader: Jerry Keefe

Signature: _____ Date: 8/18/11

Laboratory Acceptance: Dan Boudreau

Signature: _____ Date: 8/25/11

1. **Project Name:** Sampling of Stormwater Outfalls for Bacteria and Pharmaceuticals and Personal Care Products at

2. **Project Requested By:** EPA's Office of Environmental Stewardship (OES)

3. **Date of Request:** June 7, 2011

4. **Date of Project Initiation:** August 2011

5. **Project Manager:** Dave Turin

6. **Quality Assurance Officer:** TBD

7. **Project Description**

A. Objective and Scope Statement:
The Office of Environmental Measurement & Evaluation (OEME) environmental investigations and analysis team (EIA) was requested to assist with water sampling within North Providence, Rhode Island. Utilizing the stormwater outfall sampling protocol developed by the Office of Environmental Stewardship (OES), samples will be collected from stormwater outfalls for the purpose of identifying illicit connections to stormwater system outfalls. EIA staff will sample eight outfalls located in the Town of North Providence. The outfalls will be screened in the field using test kits for ammonia, chlorine, and surfactants, and analyzed at the EPA New England Regional Laboratory (NERL) for E.Coli, Enteracoccus, and Pharmaceuticals and Personal Care Products (PPCP). Additional sampling and analysis may be performed at the discretion of EIA field staff and recorded in the site field logbook.

B. Data Usage:
Data will be used to assess levels of contamination, and to confirm the presence (or absence) of contaminants at a stormwater discharge point. Site observations, documentation, and results of sampling during these inspections will be forwarded to the OES enforcement staff for enforcement actions and information requests.

C. Sampling Event Design:
EIA will conduct the stormwater monitoring on August 16, 2011. Stormwater samples will be collected under guidance of EPA's Ambient Water Sampling Standard Operating Procedure (SOP) (ECASOP-Water1). Samples will be collected as grab samples. Stormwater samples will be field screened for ammonia under guidance of EPA's SOP for Measuring Ammonia using Ammonia 0 – 6.0mg/L (Nitrogen) Hach® 0 – 6.0mg/L Test Kit (EIASOP-Test Strip1), for chlorine under guidance of EPA's SOP for Measuring Pocket Colorimeter Analysis System Low Range (0.0 – 2.00 mg/L) - Free and Total Chlorine High Range (0.0 – 4.5 mg/L) - Total Chlorine (ECASOP-ChlorineSOP1), and for surfactants under guidance of EPA's SOP for Measuring Detergents using Detergents CHEMets 0-3 ppm Test Kit (ECASOP-DetergentsSOP1). Sample sites will be located using GPS, with an accuracy goal of $\pm$ 1 meter and Position Dilution of Precision (PDOP) less than 6. Less accurate GPS reading or coordinates from maps will be

accepted when site or other conditions do not allow ± 1 meter accuracy. EIA staff will conduct in-situ monitoring for temperature, conductivity, and dissolved oxygen (DO) using a YSI model 6 sonde under guidance of the OEME EMT SOP for YSI Model 6-Series Sondes and Data Logger SOP (ECASOP-YSISondes10) and/or another approved in situ monitor.

Field QC samples will consist of the following:

Calibration:	EPA will calibrate its sondes according to the EPA sonde calibration SOP.
Field duplicate:	One duplicate sample will be collected per sampling event or approximately for every ten samples.
Trip Blank:	OEME Chemist will run appropriate QA samples for PPCP's. One blank sample will be collected for approximately every ten bacteria samples. Reported data that is less than 5 times the trip (field) blank concentration will be flagged.
QC Criteria:	Data not meeting this criteria will be reviewed by the Project Manager. Data that does not meet laboratory QA/QC criteria will be flagged by the laboratory.

D. Monitoring Parameters and Frequency of Collection:

Parameter	Number of Samples	Sample Matrix	Lab SOP (LIMS code)	Sample Container	Sample Preservation	Holding Time
Fecal Coliform	8 + 1 field dup.	Water	ECASOP-TC/EC Colilert2	120 mL sterile	Ice to 6°C	8 hours
Enterococcus	8 + 1 field dup.	Water	ECASOP-Enterolert1	120 mL sterile	Ice to 6°C	6 hours
PPCP	8	Water	EIASOP-LCMS-STAO	1 L glass amber	Ice to 4°C (acidified in lab)	7 days to extraction 40 days after extraction

8. Schedule of Tasks and Products:

Date	Activity
June 2011	Request OEME field and lab support
August 2011	Sample Collection
August 2011	Sample analyses at NERL
September 2011	Deliver analytical results to Project Manager

9. Project Organization and Responsibility:

The following is a list of key project personnel and their responsibilities:

Responsibility	Contact
Project Officer	Dave Turin
Sampling Leader/Inspector	Erin Trainor (EIA)
Sampling QC/Inspector	Erin Trainor (EIA)
Chemistry Lead	Dan Boudreau (EIA)
Laboratory Analyses	EPA NE Lab chemistry staff
Data Evaluation/Lab QC	Dan Boudreau (EIA)
Performance Audits/QC	None requested at this time

Overall Performance Coordination Jerry Keefe (EIA)

11. Data Quality Objectives:

Accuracy and Precision values are for method internal QA/QC. The values are to be considered as goals because some specific compounds are known outside these goals.

Parameter	Sample Matrix	Reporting Limits	Accuracy [1] (%)	Precision [2] (%)
E.Coli	Water	4 col/100mL	ECASOP-TotalColiformMF2	± 100 col/100mL or 30% RPD
Enterococcus	Water	1 col/100mL	TBD	± 100 col/100mL or 30% RPD
Caffeine	Water	5.0 ng/L	TBD	< 50% RPD
1,7-DMX	Water	2.5 ng/L	TBD	< 50% RPD
Acetaminophen	Water	2.5 ng/L	TBD	< 50% RPD
Carbamazepine	Water	0.5 ng/L	TBD	< 50% RPD
Primidone	Water	5.0 ng/L	TBD	< 50% RPD
Atenolol	Water	2.5 ng/L	TBD	< 50% RPD
Cotinine	Water	0.5 ng/L	TBD	< 50% RPD
Urobilin	Water	5.0 ng/L	TBD	< 50% RPD
Azithromycin	Water	1.6 ng/L	TBD	< 50% RPD

Footnotes:

1. Accuracy is based on a lab matrix spike (MS) recovery.
2. Precision is based on a lab duplicate, matrix spike duplicate (MSD), and/or laboratory fortified blanks (LFB).

12. Data Representativeness/Comparability:

Samples must be representative of the stormwater discharges. The analytical data will be compared to Water Quality Criteria/Guideline to assess compliance. 90% of the data must be valid. If data are incomplete, the Project Manager and EIA Team Leader will determine if additional sampling is needed.

13. Sampling Procedures

Samples will be collected according to the OEME EMT SOP for Ambient Water Sampling (ECASOP-Water1). Samples will be collected as grab samples. On the occasion that field personnel determine that any of the procedures described in this SAP or SOPs are inappropriate, inadequate or impractical and that another procedure must be used to obtain a sediment or water sample, the procedure will be documented in the field log book with a description of the circumstances requiring its use.

14. Sample Custody Procedures:

Samples collected will be handled in accordance with the OEME SOP for Evidence and Sample Management (OEMESOP-EVIDENCEMANAGEMENT3). Each sample will be given a unique identification number which corresponds with the assigned monitoring well number. Samples will be handled by EIA chemistry staff according to the SOP for Sample Login, Tracking, and

Sample Disposition (EIASOP-ADMLOG15.SOP).

16. Documentation and Data Reduction, and Reporting:
All information will be recorded in the samplers log books, or on field data sheets, in addition to completion of all chain of custody forms, labels, etc. Any photographs taken will be documented in the field log book and included in the inspection report. Analytical data will be tabulated by the laboratory and reported to the Project Manager in accordance to NERL procedures and the NERL QAPP. EIA field reporting will be in accordance with EIA's report SOP [EIASOP_Report Prep_Review_Distribution]

17. Data Validation:

Data will be reviewed by routine laboratory procedures as specified in the NERL QAPP - 3/31/2010, Section 11 Data Reduction, Reporting, and Internal Verification. Data will be validated against the criteria presented in sections 7D, 11, and 12 of this SAP. Any limitations on the use of data will be documented and explained. Field data will be compiled and reviewed by the Sampling Leader and any corrective actions or issues that are needed will be brought to the EIA Team Leader.

18. Performance and Systems Audits:
May be performed by the QA Office as requested by the Project Manager.

19. Corrective Action:
Any corrective action will be determined by the Sampling Leader and documented in the field logbook as necessary and discussed with the Project Manager and EIA team leader.

20. Inspection and Analytical Reports will be sent to: Dave Turin, OES - Water Technical Unit

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
N	RIR040007	12/5/31	R	R	1

Remarks

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
1.0				

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NDPES permit number)
Various locations
North Providence, RI

Entry Time/Date: **1:00 PM**
Permit Effective Date:
Exit Time/Date: **1:30 PM**
Permit Expiration Date:

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
No representatives present or notified

Other Facility Data

Name, Address of responsible Official/Title/Phone and Fax Number.

Contacted: [ ] Yes [X] No

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

[ ] Permit	[ ] Self-Monitoring Program	[ ] Pretreatment	[X] MS4
[ ] Records/Reports	[ ] Compliance Schedules	[ ] Pollution Preven ion	
[ ] Facility Site Review	[ ] Laboratory	[X] Storm Water	
[X] Effluent/Receiving Waters	[ ] Operations & Maintenance	[ ] Combined Sewer Overflow	
[ ] Flow Measurement	[ ] Sludge Handling/Disposal	[ ] Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments (Attach additional sheets of narrative and checklists as necessary)

Unannounced reconnaissance of stormwater discharge locations. Sites inspected: Gillen St; Pearl St. Test strip screening for Chlorine and Total Phosphorus was performed at 3 discharge pipes at Gillen St; all test results were zero. Pearl Street was not discharging.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**06/07/2012**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

Inspection Conclusion Data Sheet (ICDS)

FY2011

Inspector:_David Turin_____

Inspection Date: ___June 23, 2011_____

Facility Name/Address: ____North Providence, various locations
_____

Facility Manager/Title and Address (if different from facility address): ____Reconnaissance - no one contacted _____
_____

Facility Contact/Title and Address (if different from facility address):_____
_____

1. Media Type: (Check one)

□ CAA-Stationary □ CAA-Mobile Source □ CAA-112r
□ CAA-NESHAP
□ CWA-NPDES □ CWA-Pretreatment POTW □ CWA-Pretreatment IU
□ CWA 311 □ CWA 404 : CWA-Stormwater
□ EPCRA 313 □ EPCRA N313
□ RCRA-C □ RCRA-I
□ SDWA-UIC □ SDWA-PWSS
□ TSCA-Lead Paint □ TSCA-PCBs □ TSCA-Core □ TSCA-AHERA

2. Did you observe deficiencies (potential violations) during the inspection?

: Yes □ No

3. If you observed deficiencies, did you communicate them to the facility during the inspection?

□ Yes : No

4. Deficiencies observed?

_____ Potential violation of a compliance schedule in an enforceable order.

_____ Potential failure to maintain a record or failure to disclose a document.

_____ Potential failure to maintain, inspect or repair equipment including meters, sensors, and recording equipment.

_____ Potential failure to complete or submit a notification, report, certification, or manifest.

_____ Potential failure to obtain a permit, product approval, or certification.

_____ Potential failure to follow a required sampling or monitoring procedure or laboratory procedure.

_____ Potential failure to follow or develop a required management practice or procedure.

__X__ Potential failure to identify and manage a regulated waste or pollutant in any media.

_____ Potential failure to report regulated events such as spills, accidents, etc.

_____ Potential incorrect use of a material (e.g., pesticide, waste, product, etc.) or use of improper or unapproved material.

_____ Potential failure to follow a permit condition(s).

5 Did you observe or see the facility take any actions during the inspection to address the deficiencies communicated to the facility?

□ Yes □ No : N/A only if #3 was NO.

If YES, check only the action(s) actually observed/seen or write in a short description of the action in the "optional" section. (Check all that apply)

Action(s) taken

_____ Complete(d) a Notification or Report

_____ Correct(ed) Monitoring Deficiencies

_____ Correct(ed) Record Keeping Deficiencies

_____ Implemented New or Improved Management Practices or Procedures

_____ Improved Pollutant Identification (e.g., Labeling, Manifesting, Storage, etc.)

_____ Reduced Pollution (e.g., Use Reduction, Industrial Process Change, Emissions or Discharge Change, etc.)

_____ Request(ed) a Permit Application or Applied for a Permit

_____ Verified Compliance with Previously Issued Enforcement Action - Part or All Conditions

The following common air or water pollutant(s) **should only be checked** if the "Reduced Pollution" line was checked.

Water: 9 Ammonia 9BOD 9COD 9TSS 9O/G 9Total Coliform 9D.O.
9 Metals 9Cyanide 9 Other_____

Air: 9NOx 9SO2 9PM 9VOC 9Metals 9HAPs 9CO
9Other_____

6. Did you provide general compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

 Yes : No

7. Did you provide site-specific compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

 Yes : No

Optional Additional Information: EPA inspectors may wish to provide a narrative description of actions taken by the facility or assistance to help the facility come into compliance. (Narratives may be used in national or regional reports to provide examples of EPA inspection outcomes).

_____ Unannounced reconnaissance of stormwater discharge locations. Flowing stormwater pipes are being evaluated for potential future compliance sampling inspections. Inspectors participating: David Turin, EPA; Erin Trainer, EPA.
Sites evaluated: Gillen St. and Randall St; Stop and Shop parking lot (Mineral Spring Ave); Washington St; Pearl St; Hopkins Manor, 610 Smithfield St; Governor Notte Park.
_____

_____

_____

_____

_____

North Providence

Stormwater Sampling
August 16, 2011

Inspectors:

David Turin

Erin Trainor

Pearl Street (IDDE Report: Discharge No. 010)

Falco Street (IDDE Outfall No. 014)

Gillen Street (From left to right:
IDDE Outfall No. 005 A, B, C)

Gillen Street (IDDE Outfall No. 005 C)

Vulturno Street (IDDE Outfall No. 001)

North Providence

Stormwater Sampling
August 16, 2011

Inspectors:

David Turin

Erin Trainor

Pearl Street (IDDE Report: Discharge No. 010)

Falco Street (IDDE Outfall No. 014)

Gillen Street (From left to right:
IDDE Outfall No. 005 A, B, C)

Gillen Street (IDDE Outfall No. 005 C)

Vulturno Street (IDDE Outfall No. 001)

Inspection Conclusion Data Sheet (ICDS)

FY2011

Inspector:_David Turin_____

Inspection Date: ___November 16, 2011_____

Facility Name/Address: ____North Providence, various locations _____
_____

Facility Manager/Title and Address (if different from facility address): ____Reconnaissance - no one contacted _____
_____

Facility Contact/Title and Address (if different from facility address):_____
_____

1. Media Type: (Check one)

☐ CAA-Stationary	☐ CAA-Mobile Source	☐ CAA-112r	
☐ CAA-NESHAP			
☐ CWA-NPDES	☐ CWA-Pretreatment POTW	☐ CWA-Pretreatment IU	
☐ CWA 311	☐ CWA 404	☒ CWA-Stormwater	
☐ EPCRA 313	☐ EPCRA N313		
☐ RCRA-C	☐ RCRA-I		
☐ SDWA-UIC	☐ SDWA-PWSS		
☐ TSCA-Lead Paint	☐ TSCA-PCBs	☐ TSCA-Core	☐ TSCA-AHERA

2. Did you observe deficiencies (potential violations) during the inspection?

☐ Yes ☒No

3. If you observed deficiencies, did you communicate them to the facility during the inspection?

☐ Yes ☐ No

4. Deficiencies observed?

_____ Potential violation of a compliance schedule in an enforceable order.

_____ Potential failure to maintain a record or failure to disclose a document.

_____ Potential failure to maintain, inspect or repair equipment including meters, sensors, and recording equipment.

_____ Potential failure to complete or submit a notification, report, certification, or manifest.

_____Potential failure to obtain a permit, product approval, or certification.

_____ Potential failure to follow a required sampling or monitoring procedure or laboratory procedure.

_____ Potential failure to follow or develop a required management practice or procedure.

_____Potential failure to identify and manage a regulated waste or pollutant in any media.

_____ Potential failure to report regulated events such as spills, accidents, etc.

_____ Potential incorrect use of a material (e.g., pesticide, waste, product, etc.) or use of improper or unapproved material.

_____ Potential failure to follow a permit condition(s).

5 Did you observe or see the facility take any actions during the inspection to address the deficiencies communicated to the facility?

☐ Yes ☐ No ☒ N/A only if #3 was NO.

If YES, check only the action(s) actually observed/seen or write in a short description of the action in the "optional" section. (Check all that apply)

Action(s) taken

_____ Complete(d) a Notification or Report

_____ Correct(ed) Monitoring Deficiencies

_____ Correct(ed) Record Keeping Deficiencies

_____ Implemented New or Improved Management Practices or Procedures

_____ Improved Pollutant Identification (e.g., Labeling, Manifesting, Storage, etc.)

_____ Reduced Pollution (e.g., Use Reduction, Industrial Process Change, Emissions or Discharge Change, etc.)

_____ Request(ed) a Permit Application or Applied for a Permit

_____ Verified Compliance with Previously Issued Enforcement Action - Part or All Conditions

The following common air or water pollutant(s) **should only be checked** if the "Reduced Pollution" line was checked.

Water: ☐ Ammonia ☐ BOD ☐ COD ☐ TSS ☐ O/G ☐ Total Coliform ☐ D.O.
☐ Metals ☐ Cyanide ☐Other_____

Air: ☐ NOx ☐ SO2 ☐ PM ☐ VOC ☐ Metals ☐ HAPs ☐ CO
☐ Other_____

6. Did you provide general compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

☐ Yes ☒ No

7. Did you provide site-specific compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

☐ Yes ☒ No

Optional Additional Information: EPA inspectors may wish to provide a narrative description of actions taken by the facility or assistance to help the facility come into compliance. (Narratives may be used in national or regional reports to provide examples of EPA inspection outcomes).

Unannounced stormwater MS4 sampling inspection. Various locations -- see inspection report. EPA Inspectors participating: David Turin and Todd Borci.

Inspection Conclusion Data Sheet (ICDS)

FY2011

Inspector:_David Turin_____

Inspection Date: ___November 16, 2011_____

Facility Name/Address: ____North Providence, various locations _____
_____

Facility Manager/Title and Address (if different from facility address): ____Reconnaissance - no one contacted _____
_____

Facility Contact/Title and Address (if different from facility address):_____
_____

1. Media Type: (Check one)

☐ CAA-Stationary	☐ CAA-Mobile Source	☐ CAA-112r	
☐ CAA-NESHAP			
☐ CWA-NPDES	☐ CWA-Pretreatment POTW	☐ CWA-Pretreatment IU	
☐ CWA 311	☐ CWA 404	☒ CWA-Stormwater	
☐ EPCRA 313	☐ EPCRA N313		
☐ RCRA-C	☐ RCRA-I		
☐ SDWA-UIC	☐ SDWA-PWSS		
☐ TSCA-Lead Paint	☐ TSCA-PCBs	☐ TSCA-Core	☐ TSCA-AHERA

2. Did you observe deficiencies (potential violations) during the inspection?

☐ Yes ☒No

3. If you observed deficiencies, did you communicate them to the facility during the inspection?

☐ Yes ☐ No

4. Deficiencies observed?

_____ Potential violation of a compliance schedule in an enforceable order.

_____ Potential failure to maintain a record or failure to disclose a document.

_____ Potential failure to maintain, inspect or repair equipment including meters, sensors, and recording equipment.

_____ Potential failure to complete or submit a notification, report, certification, or manifest.

_____Potential failure to obtain a permit, product approval, or certification.

_____ Potential failure to follow a required sampling or monitoring procedure or laboratory procedure.

_____ Potential failure to follow or develop a required management practice or procedure.

_____Potential failure to identify and manage a regulated waste or pollutant in any media.

_____ Potential failure to report regulated events such as spills, accidents, etc.

_____ Potential incorrect use of a material (e.g., pesticide, waste, product, etc.) or use of improper or unapproved material.

_____ Potential failure to follow a permit condition(s).

5 Did you observe or see the facility take any actions during the inspection to address the deficiencies communicated to the facility?

☐ Yes ☐ No ☒ N/A only if #3 was NO.

If YES, check only the action(s) actually observed/seen or write in a short description of the action in the "optional" section. (Check all that apply)

Action(s) taken

_____ Complete(d) a Notification or Report

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_____ Improved Pollutant Identification (e.g., Labeling, Manifesting, Storage, etc.)

_____ Reduced Pollution (e.g., Use Reduction, Industrial Process Change, Emissions or Discharge Change, etc.)

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_____ Verified Compliance with Previously Issued Enforcement Action - Part or All Conditions

The following common air or water pollutant(s) **should only be checked** if the "Reduced Pollution" line was checked.

Water: ☐ Ammonia ☐ BOD ☐ COD ☐ TSS ☐ O/G ☐ Total Coliform ☐ D.O.
☐ Metals ☐ Cyanide ☐Other_____

Air: ☐ NOx ☐ SO2 ☐ PM ☐ VOC ☐ Metals ☐ HAPs ☐ CO
☐ Other_____

6. Did you provide general compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

☐ Yes ☒ No

7. Did you provide site-specific compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

☐ Yes ☒ No

Optional Additional Information: EPA inspectors may wish to provide a narrative description of actions taken by the facility or assistance to help the facility come into compliance. (Narratives may be used in national or regional reports to provide examples of EPA inspection outcomes).

Unannounced stormwater MS4 sampling inspection. Various locations -- see inspection report. EPA Inspectors participating: David Turin and Todd Borci.

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
N	RIR040007	11/11/16	<	R	1

Remarks

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
1.0				

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NDPES permit number)	Entry Time/Date	Permit Effective Date
Various locations **North Providence, RI**	**8:15 AM**	
	Exit Time/Date **12:45 PM**	Permit Expiration Date

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
No representatives present or notified

Other Facility Data

Name, Address of responsible Official/Title/Phone and Fax Number.

Contacted
[ ] Yes [X] No

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

[ ] Permit	[ ] Self-Monitoring Program	[ ] Pretreatment	[X] MS4
[ ] Records/Reports	[ ] Compliance Schedules	[ ] Pollution Preven ion	
[ ] Facility Site Review	[ ] Laboratory	[X] Storm Water	
[ ] Effluent/Receiving Waters	[ ] Operations & Maintenance	[ ] Combined Sewer Overflow	
[ ] Flow Measurement	[ ] Sludge Handling/Disposal	[ ] Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments (Attach additional sheets of narrative and checklists as necessary)

Unannounced stormwater MS4 sampling inspection. Various locations -- see inspection report.
EPA Inspectors participating: David Turin and Todd Borci.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**11/22/2011**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
N	RIR040007	11/11/16	<	R	1

Remarks

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
1.0				

Section B: Facility Data

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No representatives present or notified

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Name, Address of responsible Official/Title/Phone and Fax Number.

Contacted
[ ] Yes [X] No

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Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**11/22/2011**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
N	RIR040007	11/11/16	<	R	1

Remarks

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
1.0				

Section B: Facility Data

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No representatives present or notified

Other Facility Data

Name, Address of responsible Official/Title/Phone and Fax Number.

Contacted
[ ] Yes [X] No

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

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[ ] Records/Reports	[ ] Compliance Schedules	[ ] Pollution Preven ion	
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Unannounced stormwater MS4 sampling inspection. Various locations -- see inspection report.
EPA Inspectors participating: David Turin and Todd Borci.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**11/22/2011**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NDPES	yy/mm/dd	Inspection Type	Inspector	Fac Type
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Section B: Facility Data

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Contacted
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[ ] Facility Site Review	[ ] Laboratory	[X] Storm Water	
[ ] Effluent/Receiving Waters	[ ] Operations & Maintenance	[ ] Combined Sewer Overflow	
[ ] Flow Measurement	[ ] Sludge Handling/Disposal	[ ] Sanitary Sewer Overflow	

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Unannounced stormwater MS4 sampling inspection. Various locations -- see inspection report.
EPA Inspectors participating: David Turin and Todd Borci.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
David Turin	**USEPA, OES - SEW / 617-918-1598**	**11/22/2011**
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

EPA Region 1
Clean Water Act
Inspection Data Entry Form: 3560EZ

Version 1.03

Inspector:	Erin Trainor	Date form completed:	7/31/2015

Section A: Facility Information						
Inspection start date:	6/5/2014		Inspection start time:	09:05		
Inspection end date (if more than one day):	6/5/2014		Inspection finish time:	14:00		
NPDES ID:	RIR040005		Federal facility?	No		
Name and Location of Facility Inspected:						
Name:	City of Providence MS4					
Address:	Mashpaug Pond neighborhood					
City:	Providence	State:	RI	ZIP:	**02914**	
Facility Representative #1:						
Name:	Ed Sanchez	Title:	City of Providence Parks Department			
Address (if off-site):	1000 Elmwood Ave.					
City:	Providence	State:	RI	ZIP:	02907	
Phone #:	(401) 785-9450	Email:	Enter text			
Facility Representative #2 (if necessary):						
Name:	Enter text	Title:	Enter text			
Address (if off-site):	Enter text					
City:	Enter text	State:	Enter text	ZIP:	Enter text	
Phone #:	Enter text	Email:	Enter text			

Section B: Compliance Monitoring Information	
Clean Water Act Section (choose from only one of the following):	
CWA §308[A][B]: NPDES	Stormwater - MS4
CWA §311: Oil and Hazardous Substances	Choose an item
CWA §404: Permits for Dredge and Fill Material	Choose an item
Compliance Monitoring Type:	Inspection w/ Sampling
Compliance Monitoring Reason:	Agency Priority
If Agency Priority, then specify priority(s):	

OECA - CAFO	☐
OECA - CAFO Region Initiative Areas	☐
OECA - CSOs w/ < 50,000 service population	☐
OECA - CSOs w/ >= 50,000 service population	☐
OECA - MS4s Phase I	☐
OECA - MS4s Phase II	☒

OECA - SSOs ≥ 10 MGD and < 100 MGD	☐
Region 1 - Environmental Justice	☐
Region 1 - Green Economy / Green Infrastructure	☐
Region 1 - Industrial Laundries	☐
Region 1 - Lead Poisoning	☐
Region 1 - Municipal Infrastructure	☐
Region 1 - Pollution Prevention & Resource Conservation	☐
Region 1 - Ship / Boat Yards	☐
Region 1 - Wet Weather	☐

Compliance Monitoring Agency Type:	EPA
Was this a Joint Compliance Monitoring Activity?	No
If Joint, which party had the lead?	Choose an item or leave blank if N/A
If State lead, what was the purpose of EPA participation?	Choose an item or leave blank if N/A

Section C: ICDS Information	
Did you observe deficiencies (potential violations) during the inspection?	Choose an item
Potential excess emission in violation of regulations:	☐
Potential failure to… … complete or submit a notification, report, certification, or manifest:	☐
… follow a permit condition(s):	☐
… follow a required sample monitoring procedure or laboratory procedure:	☐
… follow or develop a required management practice or procedure:	☐
… identify and manage a regulated waste or pollutant in any media:	☒
… maintain a record or failure to disclose a document:	☐
… maintain/inspect/repair meters, sensors, and recording equipment:	☐
… obtain a permit, product approval, or certification:	☐
… report regulated events such as spills, accidents, etc.:	☐
Potential incorrect use of a material (pesticide, waste, product) or use of an unapproved material:	☐
Potential violation of a compliance schedule in an enforceable order:	☐
If you observed deficiencies, did you communicate the deficiencies to the Facility during the inspection?	No
If yes, did you observe the Facility take any actions during the inspection to address the deficiencies noted?	No
If yes, what actions were taken?	Choose an item
If the Facility reduced pollution, what pollutant was reduced?	Enter text
Did you provide *general compliance assistance* in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No
Did you provide *site-specific compliance assistance* in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No

Comments: Enter text

EPA Region 1
Clean Water Act
Inspection Data Entry Form: 3560EZ

Version 1.03

Inspector:	Erin Trainor	Date form completed:	6/19/2014

Section A: Facility Information						
Inspection start date:	6/5/2014		Inspection start time:		09:05	
Inspection end date (if more than one day):	6/5/2014		Inspection finish time:		14:00	
NPDES ID:	RIR040005		Federal facility?		No	
Name and Location of Facility Inspected:						
Name:	City of Providence MS4					
Address:	Mashpaug Pond neighborhood					
City:	Providence	State:	RI	ZIP:	**02914**	
Facility Representative #1:						
Name:	Ed Sanchez	Title:	City of Providence Parks Department			
Address (if off-site):	1000 Elmwood Ave.					
City:	Providence	State:	RI	ZIP:	02907	
Phone #:	(401) 785-9450	Email:	Enter text			
Facility Representative #2 (if necessary):						
Name:	Enter text	Title:	Enter text			
Address (if off-site):	Enter text					
City:	Enter text	State:	Enter text	ZIP:	Enter text	
Phone #:	Enter text	Email:	Enter text			

Section B: Compliance Monitoring Information		
Clean Water Act Section (choose from only one of the following):		
	CWA §308[A][B]: NPDES	Stormwater - MS4
	CWA §311: Oil and Hazardous Substances	Choose an item
	CWA §404: Permits for Dredge and Fill Material	Choose an item
Compliance Monitoring Type:		Inspection w/ Sampling
Compliance Monitoring Reason:		Agency Priority
	If Agency Priority, then specify priority(s):	

OECA - CAFO	☐
OECA - CAFO Region Initiative Areas	☐
OECA - CSOs w/ < 50,000 service population	☐
OECA - CSOs w/ >= 50,000 service population	☐
OECA - MS4s Phase I	☐
OECA - MS4s Phase II	☒

OECA - SSOs ≥ 10 MGD and < 100 MGD	☐
Region 1 - Environmental Justice	☐
Region 1 - Green Economy / Green Infrastructure	☐
Region 1 - Industrial Laundries	☐
Region 1 - Lead Poisoning	☐
Region 1 - Municipal Infrastructure	☐
Region 1 - Pollution Prevention & Resource Conservation	☐
Region 1 - Ship / Boat Yards	☐
Region 1 - Wet Weather	☐

Compliance Monitoring Agency Type:	EPA
Was this a Joint Compliance Monitoring Activity?	No
If Joint, which party had the lead?	Choose an item or leave blank if N/A
If State lead, what was the purpose of EPA participation?	Choose an item or leave blank if N/A

Section C: ICDS Information	
Did you observe deficiencies (potential violations) during the inspection?	Choose an item
Potential excess emission in violation of regulations:	☐
Potential failure to… … complete or submit a notification, report, certification, or manifest:	☐
… follow a permit condition(s):	☐
… follow a required sample monitoring procedure or laboratory procedure:	☐
… follow or develop a required management practice or procedure:	☐
… identify and manage a regulated waste or pollutant in any media:	☒
… maintain a record or failure to disclose a document:	☐
… maintain/inspect/repair meters, sensors, and recording equipment:	☐
… obtain a permit, product approval, or certification:	☐
… report regulated events such as spills, accidents, etc.:	☐
Potential incorrect use of a material (pesticide, waste, product) or use of an unapproved material:	☐
Potential violation of a compliance schedule in an enforceable order:	☐
If you observed deficiencies, did you communicate the deficiencies to the Facility during the inspection?	No
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Did you provide *general compliance assistance* in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No
Did you provide *site-specific compliance assistance* in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No

Comments:

Enter text

EPA Region 1
Clean Water Act
Inspection Data Entry Form: 3560EZ

Version 1.03

Inspector:	Erin Trainor	Date form completed:	7/28/2015

Section A: Facility Information						
Inspection start date:	6/5/2014		Inspection start time:		09:05	
Inspection end date (if more than one day):	6/5/2014		Inspection finish time:		14:00	
NPDES ID:	RIR040005		Federal facility?		No	
Name and Location of Facility Inspected:						
Name:	City of Providence MS4					
Address:	Mashpaug Pond neighborhood					
City:	Providence	State:	RI	ZIP:	**02914**	
Facility Representative #1:						
Name:	Ed Sanchez	Title:	City of Providence Parks Department			
Address (if off-site):	1000 Elmwood Ave.					
City:	Providence	State:	RI	ZIP:	02907	
Phone #:	(401) 785-9450	Email:	Enter text			
Facility Representative #2 (if necessary):						
Name:	Enter text	Title:	Enter text			
Address (if off-site):	Enter text					
City:	Enter text	State:	Enter text	ZIP:	Enter text	
Phone #:	Enter text	Email:	Enter text			

Section B: Compliance Monitoring Information	
Clean Water Act Section (choose from only one of the following):	
CWA §308[A][B]: NPDES	Stormwater - MS4
CWA §311: Oil and Hazardous Substances	Choose an item
CWA §404: Permits for Dredge and Fill Material	Choose an item
Compliance Monitoring Type:	Inspection w/ Sampling
Compliance Monitoring Reason:	Agency Priority
If Agency Priority, then specify priority(s):	

OECA - CAFO	☐
OECA - CAFO Region Initiative Areas	☐
OECA - CSOs w/ < 50,000 service population	☐
OECA - CSOs w/ >= 50,000 service population	☐
OECA - MS4s Phase I	☐
OECA - MS4s Phase II	☒

OECA - SSOs ≥ 10 MGD and < 100 MGD	☐
Region 1 - Environmental Justice	☐
Region 1 - Green Economy / Green Infrastructure	☐
Region 1 - Industrial Laundries	☐
Region 1 - Lead Poisoning	☐
Region 1 - Municipal Infrastructure	☐
Region 1 - Pollution Prevention & Resource Conservation	☐
Region 1 - Ship / Boat Yards	☐
Region 1 - Wet Weather	☐

Compliance Monitoring Agency Type:	EPA
Was this a Joint Compliance Monitoring Activity?	No
If Joint, which party had the lead?	Choose an item or leave blank if N/A
If State lead, what was the purpose of EPA participation?	Choose an item or leave blank if N/A

Section C: ICDS Information	
Did you observe deficiencies (potential violations) during the inspection?	Choose an item
Potential excess emission in violation of regulations:	☐
Potential failure to… … complete or submit a notification, report, certification, or manifest:	☐
… follow a permit condition(s):	☐
… follow a required sample monitoring procedure or laboratory procedure:	☐
… follow or develop a required management practice or procedure:	☐
… identify and manage a regulated waste or pollutant in any media:	☒
… maintain a record or failure to disclose a document:	☐
… maintain/inspect/repair meters, sensors, and recording equipment:	☐
… obtain a permit, product approval, or certification:	☐
… report regulated events such as spills, accidents, etc.:	☐
Potential incorrect use of a material (pesticide, waste, product) or use of an unapproved material:	☐
Potential violation of a compliance schedule in an enforceable order:	☐
If you observed deficiencies, did you communicate the deficiencies to the Facility during the inspection?	No
If yes, did you observe the Facility take any actions during the inspection to address the deficiencies noted?	No
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Did you provide *general compliance assistance* in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No
Did you provide *site-specific compliance assistance* in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No

Comments: Enter text

EPA New England Stormwater Outfall Inspection & Sampling Summary - Chelsea, MA 7/6/11

Location																Coordinates		YSI Meter			Weather
Date	Town	Site Name	Time	Fecal coliform (MPN/100 ml)	Entero (MPN/100ml)	Surfactants	Chlorine	NH3 (mg/l) Test St.	PPCP ng/L Atenolol	Acetaminophen	Cotinine	1,7-Dimethylxanthine	Caffeine	Sulfamethazine	Carbamazepine	GPS North(+)	GPS West (-)	Salinity ppt	Temp C	Conductivity uS	
8/16/11	N. Providence	010	8:15	2,400	250				ND	2.7	11	1 6	33	ND	ND		-71 2202638	0.4	15.8	859	Dry
8/16/11	N. Providence	015	9:40						ND	ND	3.6	7	8 3	ND	0 68						
8/16/11	N. Providence	014	10:05						ND	2.4	4.1	3.7	28	ND	1.6						
8/16/11	N. Providence	005A	11:20	4,300	2,419				ND	7	2.1	2 2	12	ND	0 84						
8/16/11	N. Providence	005B	11:15	2,400	411				ND	ND	0.74	ND	3 6	ND	ND						
8/16/11	N. Providence	005C	11:10	4 600 000	2 419				820	16000	150	4400	8500	ND	ND						
8/16/11	N. Providence	001	12:15	930	326				ND	ND	3	4	11	ND	0.78						

E. coli - color key: Red ≥ 10,000 col/100ml, Orange ≥ 1260 col/100ml, Yellow ≥ 235 col/100ml, Black < 235 col/100ml
Entero - color key: Red ≥ 1000 col/100ml, Orange ≥ 350 Yellow ≥ 61 col/100ml, Black < 61 col/100ml
NH3 - color key: Red ≥ 6 mg/L, Orange ≥ 0.5 mg/L, Yellow ≥ 0 0 mg/L
Surfactants - color key: Red ≥ 1.0 mg/L, Orange ≥ 0.5 mg/L, Yellow ≥ 0 25 mg/L, Black < 0.25 mg/L *** may give false positive at salinity greater than 1 ppt
PPCP color key: Pink = Concentrations greater than background
Cl2 - color key: Red ≥ 1.0 mg/L, Orange ≥ 0.3 mg/L, Yellow ≥ 0.02 mg/L, Black < 0.02 mg/L

REPORTING LIMITS
E. coli = 4 MPN/100mL
Enterococcus = 10 MPN/100mL
Surfactants Field = 0.1 mg/L
Ammonia Field = 0.1 mg/L

ND – not detected above the associated detection limit
NA – not applicable (analyte not tested for at that site at this time)
(~) – data reported as estimate

EPA New England Stormwater Outfall Inspection & Sampling Summary - Chelsea, MA 7/6/11

Location																Coordinates		YSI Meter			Weather
Date	Town	Site Name	Time	Fecal coliform (MPN/100 ml)	Entero (MPN/100ml)	Surfactants	Chlorine	NH3 (mg/l) Test St.	PPCP ng/L Atenolol	Acetaminophen	Cotinine	1,7-Dimethylxanthine	Caffeine	Sulfamethazine	Carbamazepine	GPS North(+)	GPS West (-)	Salinity ppt	Temp C	Conductivity uS	
8/16/11	N. Providence	010	8:15	2,400	250				ND	2.7	11	1 6	33	ND	ND		-71 2202638	0.4	15.8	859	Dry
8/16/11	N. Providence	015	9:40						ND	ND	3.6	7	8 3	ND	0 68						
8/16/11	N. Providence	014	10:05						ND	2.4	4.1	3.7	28	ND	1.6						
8/16/11	N. Providence	005A	11:20	4,300	2,419				ND	7	2.1	2 2	12	ND	0 84						
8/16/11	N. Providence	005B	11:15	2,400	411				ND	ND	0.74	ND	3 6	ND	ND						
8/16/11	N. Providence	005C	11:10	4 600 000	2 419				820	16000	150	4400	8500	ND	ND						
8/16/11	N. Providence	001	12:15	930	326				ND	ND	3	4	11	ND	0.78						

E. coli - color key: Red ≥ 10,000 col/100ml, Orange ≥ 1260 col/100ml, Yellow ≥ 235 col/100ml, Black < 235 col/100ml
Entero - color key: Red ≥ 1000 col/100ml, Orange ≥ 350 Yellow ≥ 61 col/100ml, Black < 61 col/100ml
NH3 - color key: Red ≥ 6 mg/L, Orange ≥ 0.5 mg/L, Yellow ≥ 0 0 mg/L
Surfactants - color key: Red ≥ 1.0 mg/L, Orange ≥ 0.5 mg/L, Yellow ≥ 0 25 mg/L, Black < 0.25 mg/L *** may give false positive at salinity greater than 1 ppt
PPCP color key: Pink = Concentrations greater than background
Cl2 - color key: Red ≥ 1.0 mg/L, Orange ≥ 0.3 mg/L, Yellow ≥ 0.02 mg/L, Black < 0.02 mg/L

REPORTING LIMITS
E. coli = 4 MPN/100mL
Enterococcus = 10 MPN/100mL
Surfactants Field = 0.1 mg/L
Ammonia Field = 0.1 mg/L

ND – not detected above the associated detection limit
NA – not applicable (analyte not tested for at that site at this time)
(~) – data reported as estimate

June 8, 2011 - EPA water quality field testing results

239 Putnam Pike, Smithfield/Johnston line, RI

	Time	Ammonia	Surfactants	Chlorine	Temperature	Conductivity	Salinity
6" deep (after 30sec-CL)	11:35am	0	0.125	0			
6" deep (after several min-CL)				0.08			
Deep (after 3 min-CL)	11:55am		0.25	0.05			
Deep (insitu w/probe)	12:30pm				22.3	199	0.1

Evergreen Parkway, North Providence, RI

	Time	Ammonia	Surfactants	Chlorine	Temperature	Conductivity	Salinity
In stream (after 3 min-CL)	1:30pm	0	<0.25	0.06	26	351.9	0.2

Comments

shallow sample

Comments

small (6") fish present; 1/2 way under road, there's a little (1' high) dam

North Providence – Follow-up PPCP Sampling
Tentatively scheduled for Nov 9, 2011

Potential sampling stations:

1. Pearl Av (010)
2. Stream btw David and Spicer Sts (access from David St, behind bar and grill on Mineral Sp)
3. Stream btw Milton and Rosedale Sts, at Fruit Hill Av, op. RI College
4. Outfall nr end of driveway onWoonasquatucket Av, to left and opp. Metcalf Av, if found
5. Culverts behind Peter Blackburne, Inc, nr Falco St (014 A),
6. And Falco St (014 B) , if both pipes flowing
7. Behind Cumberland Farms @ Smith St and Rt 104, if flowing
8. Mill St, behind post office or between P.O. and Steere Av, if found
9. Brook Farm Rd (019), nr Douglas Av (Rt 7)
10. Obed St (003), off Charles St, if flowing
11. Culverts under Mineral Spring Av, if accessible
12. Gillen Av (005 C)
13. Gillen Ave (005 A, if flowing)

North Providence – Follow-up PPCP Sampling
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11. Culverts under Mineral Spring Av, if accessible
12. Gillen Av (005 C)
13. Gillen Ave (005 A, if flowing)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I

DATE: October 18, 2013

SUBJ: MS4 Reconnaissance Inspection
Town of North Providence, Rhode Island

FROM: Erin Trainor, Inspector

TO: File

REQUESTED BY: Dave Turin (OES)

I. Background Information

A. Date, Time of inspection: Tuesday, September 17, 2013, 12:00 PM

B. Weather Conditions: Sunny, approximately 60 degrees F

C. USEPA Representatives: Erin Trainor
David Turin
Denny Dart

D. Site Representative(s): Glenn J. Corrente
Department of Public Works
2 Mafalda Street
North Providence, RI 02904
Telephone: (401) 233-1440
Fax: (401) 233-1442

Note: The Site Representative was not contacted.

E. Address: Various locations associated with the outfall located at 457 Woonasquatucket Avenue as well as areas along Kristen Drive and Gillen Avenue within the Town of North Providence, Rhode Island municipal separate storm sewer system (MS4).

II. Purpose of Inspection

The purpose of the inspection was to locate potential sample areas which were identified by the Municipal Mapping Assistance Program as areas with possible illicit connections or illegal discharges that may adversely impact the water quality in the Woonasquatucket River.

III. Inspection Observations and Findings

On Tuesday, September 17, 2013, EPA inspectors David Turin, Denny Dart, and Erin Trainor met with Jennifer Stout and Eric Beck of Rhode Island Department of Environmental Management (RIDEM). Inspectors reviewed areas assessed by the Municipal Mapping Assistance Program which were recommend to EPA as potential areas to sample within the Town of North Providence based on observations collected over the course of summer 2013. Inspectors then conducted a reconnaissance inspection within the Town of North Providence at locations associated with the outfall identified as "priority outfall" located at 457 Woonasquatucket Avenue, as well as areas along Kristen Drive and Gillen Avenue.

The inspectors met with RIDEM personnel at 08:40, and the inspection started in North Providence at 12:00 PM. At the time of the inspection the weather was sunny and approximately 60 degrees Fahrenheit. According to weather underground, a rain event rain event of 0.08 inches was reported on September 16, 2013 in Providence, Rhode Island. Photographs are included at the end of this report.

End of Report

Attachments: Photographs

"Priority outfall" located at 457 Woonasquatucket Avenue. The outfall depicted on the left measures approximately 36 inches in diameter, the outfall depicted in the middle measures approximately 8 inches in diameter, and the outfall depicted on the right measures approximately 48 inches in diameter.

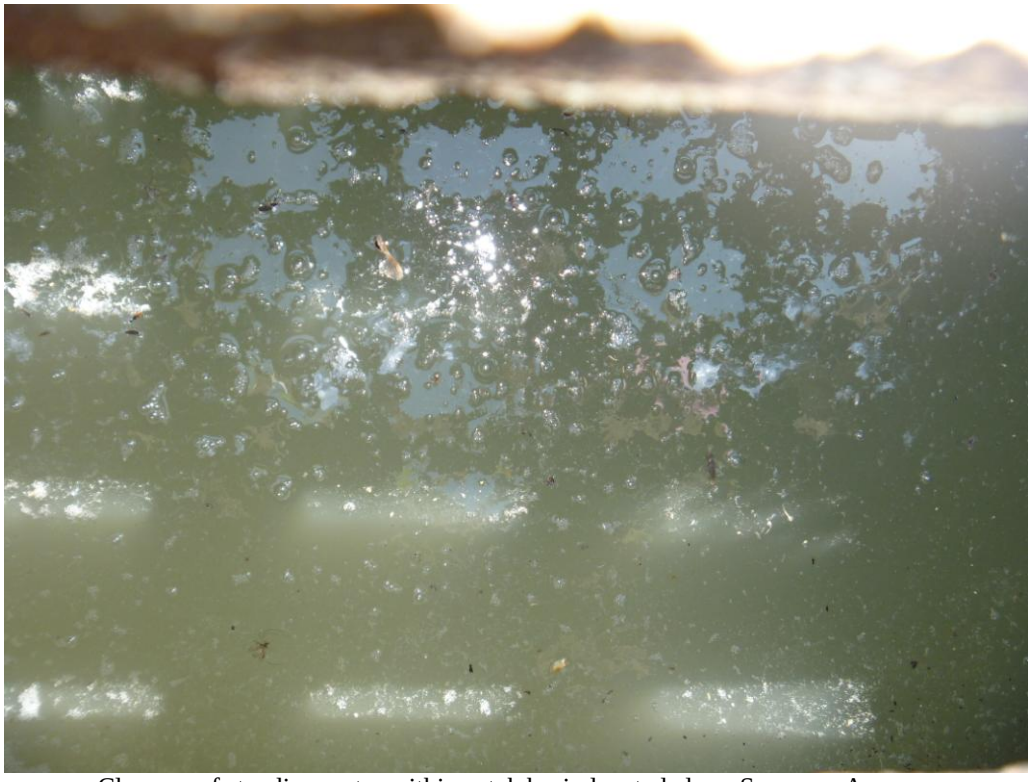
Paper observed downstream of the "priority outfall".

Catch basin along Woonasquatucket Avenue which leads to the 48 inch outfall at the "priority outfall". Running water was heard at catch basin.

Access manhole that leads to 36 inch outfall at the "priority outfall".

Catch basin and access manhole located at 25 Whipple Road, upstream of the "priority outfall". A trickle was heard upstream.

Catch basin located along Sampson Avenue, upstream of the "priority outfall".



Close up of standing water within catch basin located along Sampson Avenue.

View of standing water located within catch basin in front of 11 Kristen Drive.

Three outfalls located along Gillen Avenue. Note: the outfall depicted on the right has had historical contamination documented by EPA in 2011, identified as "005C".

Paper observed downstream of outfall "005C".

MUNICIPAL STORMWATER SEWER SYSTEM
NORTH PROVIDENCE, RHODE ISLAND

Sampling of Stormwater Outfalls for
Bacteria and Pharmaceuticals and Personal Care Products

Sampling & Analysis Plan (SAP)
August 2011

U.S. Environmental Protection Agency
EPA New England
Office of Environmental Measurement & Evaluation
Environmental Investigations & Analysis Unit

Project Manager: Dave Turin

Signature: _____ Date: _____

EIA Field Sampling Leader: Erin Trainor

Signature: _____ Date: 8/12/2011

EIA Field Team Leader: Jerry Keefe

Signature: _____ Date: 8/18/11

Laboratory Acceptance: Dan Boudreau

Signature: _____ Date: 8/23/11

1. **Project Name:** Sampling of Stormwater Outfalls for Bacteria and Pharmaceuticals and Personal Care Products at

2. **Project Requested By:** EPA's Office of Environmental Stewardship (OES)

3. **Date of Request:** June 7, 2011

4. **Date of Project Initiation:** August 2011

5. **Project Manager:** Dave Turin

6. **Quality Assurance Officer:** TBD

7. **Project Description**

A. Objective and Scope Statement:
The Office of Environmental Measurement & Evaluation (OEME) environmental investigations and analysis team (EIA) was requested to assist with water sampling within North Providence, Rhode Island. Utilizing the stormwater outfall sampling protocol developed by the Office of Environmental Stewardship (OES), samples will be collected from stormwater outfalls for the purpose of identifying illicit connections to stormwater system outfalls. EIA staff will sample eight outfalls located in the Town of North Providence. The outfalls will be screened in the field using test kits for ammonia, chlorine, and surfactants, and analyzed at the EPA New England Regional Laboratory (NERL) for E.Coli, Enteracoccus, and Pharmaceuticals and Personal Care Products (PPCP). Additional sampling and analysis may be performed at the discretion of EIA field staff and recorded in the site field logbook.

B. Data Usage:
Data will be used to assess levels of contamination, and to confirm the presence (or absence) of contaminants at a stormwater discharge point. Site observations, documentation, and results of sampling during these inspections will be forwarded to the OES enforcement staff for enforcement actions and information requests.

C. Sampling Event Design:
EIA will conduct the stormwater monitoring on August 16, 2011. Stormwater samples will be collected under guidance of EPA's Ambient Water Sampling Standard Operating Procedure (SOP) (ECASOP-Water1). Samples will be collected as grab samples. Stormwater samples will be field screened for ammonia under guidance of EPA's SOP for Measuring Ammonia using Ammonia 0 – 6.0mg/L (Nitrogen) Hach® 0 – 6.0mg/L Test Kit (EIASOP-Test Strip1), for chlorine under guidance of EPA's SOP for Measuring Pocket Colorimeter Analysis System Low Range (0.0 – 2.00 mg/L) - Free and Total Chlorine High Range (0.0 – 4.5 mg/L) - Total Chlorine (ECASOP-ChlorineSOP1), and for surfactants under guidance of EPA's SOP for Measuring Detergents using Detergents CHEMets 0-3 ppm Test Kit (ECASOP-DetergentsSOP1). Sample sites will be located using GPS, with an accuracy goal of $\pm$ 1 meter and Position Dilution of Precision (PDOP) less than 6. Less accurate GPS reading or coordinates from maps will be

accepted when site or other conditions do not allow ± 1 meter accuracy. EIA staff will conduct in-situ monitoring for temperature, conductivity, and dissolved oxygen (DO) using a YSI model 6 sonde under guidance of the OEME EMT SOP for YSI Model 6-Series Sondes and Data Logger SOP (ECASOP-YSISondes10) and/or another approved in situ monitor.

Field QC samples will consist of the following:

Calibration:	EPA will calibrate its sondes according to the EPA sonde calibration SOP.
Field duplicate:	One duplicate sample will be collected per sampling event or approximately for every ten samples.
Trip Blank:	OEME Chemist will run appropriate QA samples for PPCP's. One blank sample will be collected for approximately every ten bacteria samples. Reported data that is less than 5 times the trip (field) blank concentration will be flagged.
QC Criteria:	Data not meeting this criteria will be reviewed by the Project Manager. Data that does not meet laboratory QA/QC criteria will be flagged by the laboratory.

D. Monitoring Parameters and Frequency of Collection:

Parameter	Number of Samples	Sample Matrix	Lab SOP (LIMS code)	Sample Container	Sample Preservation	Holding Time
Fecal Coliform	8 + 1 field dup.	Water	ECASOP-TC/EC Colilert2	120 mL sterile	Ice to 6°C	8 hours
Enterococcus	8 + 1 field dup.	Water	ECASOP-Enterolert1	120 mL sterile	Ice to 6°C	6 hours
PPCP	8	Water	EIASOP-LCMS-STAO	1 L glass amber	Ice to 4°C (acidified in lab)	7 days to extraction 40 days after extraction

8. Schedule of Tasks and Products:

Date	Activity
June 2011	Request OEME field and lab support
August 2011	Sample Collection
August 2011	Sample analyses at NERL
September 2011	Deliver analytical results to Project Manager

9. Project Organization and Responsibility:

The following is a list of key project personnel and their responsibilities:

Responsibility	Contact
Project Officer	Dave Turin
Sampling Leader/Inspector	Erin Trainor (EIA)
Sampling QC/Inspector	Erin Trainor (EIA)
Chemistry Lead	Dan Boudreau (EIA)
Laboratory Analyses	EPA NE Lab chemistry staff
Data Evaluation/Lab QC	Dan Boudreau (EIA)
Performance Audits/QC	None requested at this time

Overall Performance Coordination Jerry Keefe (EIA)

11. Data Quality Objectives:

Accuracy and Precision values are for method internal QA/QC. The values are to be considered as goals because some specific compounds are known outside these goals.

Parameter	Sample Matrix	Reporting Limits	Accuracy [1] (%)	Precision [2] (%)
E.Coli	Water	4 col/100mL	ECASOP-TotalColiformMF2	± 100 col/100mL or 30% RPD
Enterococcus	Water	1 col/100mL	TBD	± 100 col/100mL or 30% RPD
Caffeine	Water	5.0 ng/L	TBD	< 50% RPD
1,7-DMX	Water	2.5 ng/L	TBD	< 50% RPD
Acetaminophen	Water	2.5 ng/L	TBD	< 50% RPD
Carbamazepine	Water	0.5 ng/L	TBD	< 50% RPD
Primidone	Water	5.0 ng/L	TBD	< 50% RPD
Atenolol	Water	2.5 ng/L	TBD	< 50% RPD
Cotinine	Water	0.5 ng/L	TBD	< 50% RPD
Urobilin	Water	5.0 ng/L	TBD	< 50% RPD
Azithromycin	Water	1.6 ng/L	TBD	< 50% RPD

Footnotes:

1. Accuracy is based on a lab matrix spike (MS) recovery.
2. Precision is based on a lab duplicate, matrix spike duplicate (MSD), and/or laboratory fortified blanks (LFB).

12. Data Representativeness/Comparability:

Samples must be representative of the stormwater discharges. The analytical data will be compared to Water Quality Criteria/Guideline to assess compliance. 90% of the data must be valid. If data are incomplete, the Project Manager and EIA Team Leader will determine if additional sampling is needed.

13. Sampling Procedures

Samples will be collected according to the OEME EMT SOP for Ambient Water Sampling (ECASOP-Water1). Samples will be collected as grab samples. On the occasion that field personnel determine that any of the procedures described in this SAP or SOPs are inappropriate, inadequate or impractical and that another procedure must be used to obtain a sediment or water sample, the procedure will be documented in the field log book with a description of the circumstances requiring its use.

14. Sample Custody Procedures:

Samples collected will be handled in accordance with the OEME SOP for Evidence and Sample Management (OEMESOP-EVIDENCEMANAGEMENT3). Each sample will be given a unique identification number which corresponds with the assigned monitoring well number. Samples will be handled by EIA chemistry staff according to the SOP for Sample Login, Tracking, and

Sample Disposition (EIASOP-ADMLOG15.SOP).

16. Documentation and Data Reduction, and Reporting:
All information will be recorded in the samplers log books, or on field data sheets, in addition to completion of all chain of custody forms, labels, etc. Any photographs taken will be documented in the field log book and included in the inspection report. Analytical data will be tabulated by the laboratory and reported to the Project Manager in accordance to NERL procedures and the NERL QAPP. EIA field reporting will be in accordance with EIA's report SOP [EIASOP_Report Prep_Review_Distribution]

17. Data Validation:

Data will be reviewed by routine laboratory procedures as specified in the NERL QAPP - 3/31/2010, Section 11 Data Reduction, Reporting, and Internal Verification. Data will be validated against the criteria presented in sections 7D, 11, and 12 of this SAP. Any limitations on the use of data will be documented and explained. Field data will be compiled and reviewed by the Sampling Leader and any corrective actions or issues that are needed will be brought to the EIA Team Leader.

18. Performance and Systems Audits:
May be performed by the QA Office as requested by the Project Manager.

19. Corrective Action:
Any corrective action will be determined by the Sampling Leader and documented in the field logbook as necessary and discussed with the Project Manager and EIA team leader.

20. Inspection and Analytical Reports will be sent to: Dave Turin, OES - Water Technical Unit

Inspection Conclusion Data Sheet (ICDS)

FY2011

Inspector:_David Turin_____

Inspection Date: ___March 23, 2011_____

Facility Name/Address: ____North Providence, various locations
_____

Facility Manager/Title and Address (if different from facility address): ____Reconnaissance - no one contacted _____
_____

Facility Contact/Title and Address (if different from facility address):_____
_____

1. Media Type: (Check one)

□ CAA-Stationary □ CAA-Mobile Source □ CAA-112r
□ CAA-NESHAP
□ CWA-NPDES □ CWA-Pretreatment POTW □ CWA-Pretreatment IU
□ CWA 311 □ CWA 404 : CWA-Stormwater
□ EPCRA 313 □ EPCRA N313
□ RCRA-C □ RCRA-I
□ SDWA-UIC □ SDWA-PWSS
□ TSCA-Lead Paint □ TSCA-PCBs □ TSCA-Core □ TSCA-AHERA

2. Did you observe deficiencies (potential violations) during the inspection?

: Yes □ No

3. If you observed deficiencies, did you communicate them to the facility during the inspection?

□ Yes : No

4. Deficiencies observed?

_____ Potential violation of a compliance schedule in an enforceable order.

_____ Potential failure to maintain a record or failure to disclose a document.

_____ Potential failure to maintain, inspect or repair equipment including meters, sensors, and recording equipment.

_____ Potential failure to complete or submit a notification, report, certification, or manifest.

_____ Potential failure to obtain a permit, product approval, or certification.

_____ Potential failure to follow a required sampling or monitoring procedure or laboratory procedure.

_____ Potential failure to follow or develop a required management practice or procedure.

__X__ Potential failure to identify and manage a regulated waste or pollutant in any media.

_____ Potential failure to report regulated events such as spills, accidents, etc.

_____ Potential incorrect use of a material (e.g., pesticide, waste, product, etc.) or use of improper or unapproved material.

_____ Potential failure to follow a permit condition(s).

5 Did you observe or see the facility take any actions during the inspection to address the deficiencies communicated to the facility?

□ Yes □ No : N/A only if #3 was NO.

If YES, check only the action(s) actually observed/seen or write in a short description of the action in the "optional" section. (Check all that apply)

Action(s) taken

_____ Complete(d) a Notification or Report

_____ Correct(ed) Monitoring Deficiencies

_____ Correct(ed) Record Keeping Deficiencies

_____ Implemented New or Improved Management Practices or Procedures

_____ Improved Pollutant Identification (e.g., Labeling, Manifesting, Storage, etc.)

_____ Reduced Pollution (e.g., Use Reduction, Industrial Process Change, Emissions or Discharge Change, etc.)

_____ Request(ed) a Permit Application or Applied for a Permit

_____ Verified Compliance with Previously Issued Enforcement Action - Part or All Conditions

The following common air or water pollutant(s) **should only be checked** if the "Reduced Pollution" line was checked.

Water: 9 Ammonia 9BOD 9COD 9TSS 9O/G 9Total Coliform 9D.O.
9 Metals 9Cyanide 9 Other_____

Air: 9NOx 9SO2 9PM 9VOC 9Metals 9HAPs 9CO
9Other_____

6. Did you provide general compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

7. Did you provide site-specific compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

Optional Additional Information: EPA inspectors may wish to provide a narrative description of actions taken by the facility or assistance to help the facility come into compliance. (Narratives may be used in national or regional reports to provide examples of EPA inspection outcomes).

_____ Unannounced reconnaissance of stormwater discharge locations. Flowing stormwater pipes are being evaluated for potential future compliance sampling. Inspectors participating: David Turin, EPA; Alex Rosenberg, EPA; Alex Pinto, RI DEM.

Inspection Conclusion Data Sheet (ICDS)

FY2011

Inspector:_David Turin_____

Inspection Date: ___June 23, 2011_____

Facility Name/Address: ____North Providence, various locations
_____

Facility Manager/Title and Address (if different from facility address): ____Reconnaissance - no one contacted _____
_____

Facility Contact/Title and Address (if different from facility address):_____
_____

1. Media Type: (Check one)

□ CAA-Stationary □ CAA-Mobile Source □ CAA-112r
□ CAA-NESHAP
□ CWA-NPDES □ CWA-Pretreatment POTW □ CWA-Pretreatment IU
□ CWA 311 □ CWA 404 : CWA-Stormwater
□ EPCRA 313 □ EPCRA N313
□ RCRA-C □ RCRA-I
□ SDWA-UIC □ SDWA-PWSS
□ TSCA-Lead Paint □ TSCA-PCBs □ TSCA-Core □ TSCA-AHERA

2. Did you observe deficiencies (potential violations) during the inspection?

: Yes □ No

3. If you observed deficiencies, did you communicate them to the facility during the inspection?

□ Yes : No

4. Deficiencies observed?

_____ Potential violation of a compliance schedule in an enforceable order.

_____ Potential failure to maintain a record or failure to disclose a document.

_____ Potential failure to maintain, inspect or repair equipment including meters, sensors, and recording equipment.

_____ Potential failure to complete or submit a notification, report, certification, or manifest.

_____ Potential failure to obtain a permit, product approval, or certification.

_____ Potential failure to follow a required sampling or monitoring procedure or laboratory procedure.

_____ Potential failure to follow or develop a required management practice or procedure.

__X__ Potential failure to identify and manage a regulated waste or pollutant in any media.

_____ Potential failure to report regulated events such as spills, accidents, etc.

_____ Potential incorrect use of a material (e.g., pesticide, waste, product, etc.) or use of improper or unapproved material.

_____ Potential failure to follow a permit condition(s).

5 Did you observe or see the facility take any actions during the inspection to address the deficiencies communicated to the facility?

□ Yes □ No : N/A only if #3 was NO.

If YES, check only the action(s) actually observed/seen or write in a short description of the action in the "optional" section. (Check all that apply)

Action(s) taken

_____ Complete(d) a Notification or Report

_____ Correct(ed) Monitoring Deficiencies

_____ Correct(ed) Record Keeping Deficiencies

_____ Implemented New or Improved Management Practices or Procedures

_____ Improved Pollutant Identification (e.g., Labeling, Manifesting, Storage, etc.)

_____ Reduced Pollution (e.g., Use Reduction, Industrial Process Change, Emissions or Discharge Change, etc.)

_____ Request(ed) a Permit Application or Applied for a Permit

_____ Verified Compliance with Previously Issued Enforcement Action - Part or All Conditions

The following common air or water pollutant(s) **should only be checked** if the "Reduced Pollution" line was checked.

Water: 9 Ammonia 9BOD 9COD 9TSS 9O/G 9Total Coliform 9D.O.
9 Metals 9Cyanide 9 Other_____

Air: 9NOx 9SO2 9PM 9VOC 9Metals 9HAPs 9CO
9Other_____

6. Did you provide general compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

7. Did you provide site-specific compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

Optional Additional Information: EPA inspectors may wish to provide a narrative description of actions taken by the facility or assistance to help the facility come into compliance. (Narratives may be used in national or regional reports to provide examples of EPA inspection outcomes).

_____ Unannounced reconnaissance of stormwater discharge locations. Flowing stormwater pipes are being evaluated for potential future compliance sampling inspections. Inspectors participating: David Turin, EPA; Erin Trainer, EPA.
Sites evaluated: Gillen St. and Randall St; Stop and Shop parking lot (Mineral Spring Ave); Washington St; Pearl St; Hopkins Manor, 610 Smithfield St; Governor Notte Park.
_____

_____

_____

_____

_____

Inspection Conclusion Data Sheet (ICDS)

FY2011

Inspector:_David Turin_____

Inspection Date: ___August 15, 2011_____

Facility Name/Address: ____North Providence, various locations
_____

Facility Manager/Title and Address (if different from facility address): ____Reconnaissance - no one contacted _____
_____

Facility Contact/Title and Address (if different from facility address):_____
_____

1. Media Type: (Check one)

□ CAA-Stationary □ CAA-Mobile Source □ CAA-112r
□ CAA-NESHAP
□ CWA-NPDES □ CWA-Pretreatment POTW □ CWA-Pretreatment IU
□ CWA 311 □ CWA 404 : CWA-Stormwater
□ EPCRA 313 □ EPCRA N313
□ RCRA-C □ RCRA-I
□ SDWA-UIC □ SDWA-PWSS
□ TSCA-Lead Paint □ TSCA-PCBs □ TSCA-Core □ TSCA-AHERA

2. Did you observe deficiencies (potential violations) during the inspection?

□ Yes : No

3. If you observed deficiencies, did you communicate them to the facility during the inspection?

□ Yes □ No

4. Deficiencies observed?

_____ Potential violation of a compliance schedule in an enforceable order.

_____ Potential failure to maintain a record or failure to disclose a document.

_____ Potential failure to maintain, inspect or repair equipment including meters, sensors, and recording equipment.

_____ Potential failure to complete or submit a notification, report, certification, or manifest.

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_____ Potential failure to follow or develop a required management practice or procedure.

_____Potential failure to identify and manage a regulated waste or pollutant in any media.

_____ Potential failure to report regulated events such as spills, accidents, etc.

_____ Potential incorrect use of a material (e.g., pesticide, waste, product, etc.) or use of improper or unapproved material.

_____ Potential failure to follow a permit condition(s).

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If YES, check only the action(s) actually observed/seen or write in a short description of the action in the "optional" section. (Check all that apply)

Action(s) taken

_____ Complete(d) a Notification or Report

_____ Correct(ed) Monitoring Deficiencies

_____ Correct(ed) Record Keeping Deficiencies

_____ Implemented New or Improved Management Practices or Procedures

_____ Improved Pollutant Identification (e.g., Labeling, Manifesting, Storage, etc.)

_____ Reduced Pollution (e.g., Use Reduction, Industrial Process Change, Emissions or Discharge Change, etc.)

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The following common air or water pollutant(s) **should only be checked** if the "Reduced Pollution" line was checked.

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9 Metals 9Cyanide 9 Other_____

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9Other_____

6. Did you provide general compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

7. Did you provide site-specific compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

Optional Additional Information: EPA inspectors may wish to provide a narrative description of actions taken by the facility or assistance to help the facility come into compliance. (Narratives may be used in national or regional reports to provide examples of EPA inspection outcomes).

Unannounced reconnaissance of stormwater discharge locations. Flowing stormwater pipes are being evaluated for potential future compliance sampling inspections. EPA Inspectors participating: David Turin and Erin Trainer. Sites evaluated: Stop and Shop parking lot (Mineral Spring Ave); Vulturno St; Gillen St; Jane St; Aldritch St; Woonasquatucket Ave @ Allandale Apts; and Woonasquatucket Ave and Falco St. Heavy rain throughout day; moderate to high flow volumes from all of the assessed discharge pipes. Follow-up meeting with Peter Naumann of DEM, who is helping us coordinate bacteria sample analysis by RI DOH of samples to be collected on 8/16/11.

Inspection Conclusion Data Sheet (ICDS)

FY2011

Inspector:_David Turin_____

Inspection Date: ___August 15, 2011_____

Facility Name/Address: ____North Providence, various locations
_____

Facility Manager/Title and Address (if different from facility address): ____Reconnaissance - no one contacted _____
_____

Facility Contact/Title and Address (if different from facility address):_____
_____

1. Media Type: (Check one)

□ CAA-Stationary □ CAA-Mobile Source □ CAA-112r
□ CAA-NESHAP
□ CWA-NPDES □ CWA-Pretreatment POTW □ CWA-Pretreatment IU
□ CWA 311 □ CWA 404 : CWA-Stormwater
□ EPCRA 313 □ EPCRA N313
□ RCRA-C □ RCRA-I
□ SDWA-UIC □ SDWA-PWSS
□ TSCA-Lead Paint □ TSCA-PCBs □ TSCA-Core □ TSCA-AHERA

2. Did you observe deficiencies (potential violations) during the inspection?

: Yes □No

3. If you observed deficiencies, did you communicate them to the facility during the inspection?

□ Yes : No

4. Deficiencies observed?

_____ Potential violation of a compliance schedule in an enforceable order.

_____ Potential failure to maintain a record or failure to disclose a document.

_____ Potential failure to maintain, inspect or repair equipment including meters, sensors, and recording equipment.

_____ Potential failure to complete or submit a notification, report, certification, or manifest.

__X__Potential failure to obtain a permit, product approval, or certification.

_____ Potential failure to follow a required sampling or monitoring procedure or laboratory procedure.

_____ Potential failure to follow or develop a required management practice or procedure.

__X__Potential failure to identify and manage a regulated waste or pollutant in any media.

_____ Potential failure to report regulated events such as spills, accidents, etc.

_____ Potential incorrect use of a material (e.g., pesticide, waste, product, etc.) or use of improper or unapproved material.

_____ Potential failure to follow a permit condition(s).

5 Did you observe or see the facility take any actions during the inspection to address the deficiencies communicated to the facility?

□ Yes □ No : N/A only if #3 was NO.

If YES, check only the action(s) actually observed/seen or write in a short description of the action in the "optional" section. (Check all that apply)

Action(s) taken

_____ Complete(d) a Notification or Report

_____ Correct(ed) Monitoring Deficiencies

_____ Correct(ed) Record Keeping Deficiencies

_____ Implemented New or Improved Management Practices or Procedures

_____ Improved Pollutant Identification (e.g., Labeling, Manifesting, Storage, etc.)

_____ Reduced Pollution (e.g., Use Reduction, Industrial Process Change, Emissions or Discharge Change, etc.)

_____ Request(ed) a Permit Application or Applied for a Permit

_____ Verified Compliance with Previously Issued Enforcement Action - Part or All Conditions

The following common air or water pollutant(s) **should only be checked** if the "Reduced Pollution" line was checked.

Water: 9 Ammonia 9BOD 9COD 9TSS 9O/G 9Total Coliform 9D.O.
9 Metals 9Cyanide 9 Other_____

Air: 9NOx 9SO2 9PM 9VOC 9Metals 9HAPs 9CO
9Other_____

6. Did you provide general compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

7. Did you provide site-specific compliance assistance in accordance with the policy on the Role of the EPA Inspector in Providing Compliance Assistance During Inspections?

□ Yes : No

Optional Additional Information: EPA inspectors may wish to provide a narrative description of actions taken by the facility or assistance to help the facility come into compliance. (Narratives may be used in national or regional reports to provide examples of EPA inspection outcomes).

Unannounced stormwater MS4 sampling inspection. EPA Inspectors participating: David Turin and Erin Trainer.
Sites sampled: Vulturno St; Gillen St; Woonasquatucket Ave @ Allandale Apts; and Woonasquatucket Ave and Falco St. Partly sunny, temp. mid-60s throughout day. Samples analyzed on-site for NH3, surfactants, and TRC; samples sent to RI DOH lab for fecal coliform and enterococci; samples sent to OAME for pharmaceutical analysis. See inspection report.

EPA Region 1
Clean Water Act
Inspection Data Entry Form: 3560EZ

Inspector:	Erin Trainor	Date form completed:	9/18/2013

Section A: Facility Information						
Inspection start date:	9/17/2013	Inspection end date (if more than one day):	9/17/2013			
NPDES ID:	RIR040000	Federal facility?	No			
Name and Location of Facility Inspected:						
Name:	Town of North Providence, RI MS4					
Address:	Various MS4 catch basins and outfalls					
City:	North Providence	State:	RI	ZIP:	02911	
Facility On-Site Representative #1:						
Name:	Enter text					
Title:	Enter text					
Phone #:	Enter text	Fax # / email:	Enter text			
Facility On-Site Representative #2 (if necessary):						
Name:	Enter text					
Title:	Enter text					
Phone #:	Enter text	Fax # / email:	Enter text			

Section B: Compliance Monitoring Information	
Compliance Monitoring Activity Name:	Recon
Clean Water Act Section (choose from only one of the following):	
CWA §308[A][B]: NPDES	Stormwater - MS4
CWA §311: Oil and Hazardous Substances	Choose an item
CWA §404: Permits for Dredge and Fill Material	Choose an item
Compliance Monitoring Type:	Reconnaissance
Compliance Monitoring Reason:	Agency Priority

If Agency Priority, then specify priority(s):

OECA - CAFO	☐
OECA - CAFO Region Initiative Areas	☐
OECA - CSOs w/ < 50,000 service population	☐
OECA - CSOs w/ >= 50,000 service population	☐
OECA - MS4s Phase I	☐
OECA - MS4s Phase II	☒
Region 1 - Environmental Justice	☐
Region 1 - Green Economy / Green Infrastructure	☐
Region 1 - Industrial Laundries	☐
Region 1 - Lead Poisoning	☐
Region 1 - Municipal Infrastructure	☐

Region 1 - Pollution Prevention & Resource Conservation	☐
Region 1 - Ship / Boat Yards	☐
Region 1 - Wet Weather	☐

Compliance Monitoring Agency Type:	EPA
Was this a Joint Compliance Monitoring Activity?	No
Which party had the lead?	Choose an item or leave blank if N/A
If State lead, what was the purpose of EPA participation?	Choose an item or leave blank if N/A

Section C: ICDS Information	
Did you observe deficiencies (potential violations) during the inspection?	Yes
Potential excess emission in violation of regulations:	☐
Potential failure to… … complete or submit a notification, report, certification, or manifest:	☐
… follow a permit condition(s):	☐
… follow a required sample monitoring procedure or laboratory procedure:	☐
… follow or develop a required management practice or procedure:	☐
… identify and manage a regulated waste or pollutant in any media:	☒
… maintain a record or failure to disclose a document:	☐
… maintain/inspect/repair meters, sensors, and recording equipment:	☐
… obtain a permit, product approval, or certification:	☐
… report regulated events such as spills, accidents, etc.:	☐
Potential incorrect use of a material (pesticide, waste, product) or use of an unapproved material:	☐
Potential violation of a compliance schedule in an enforceable order:	☐
If you observed deficiencies, did you communicate the deficiencies to the Facility during the inspection?	No
If yes, did you observe the Facility take any actions during the inspection to address the deficiencies noted?	Choose an item
If yes, what actions were taken?	Choose an item
If the Facility reduced pollution, what pollutant was reduced?	Enter text
Did you provide general compliance assistance in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No
Did you provide site-specific compliance assistance in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No

Comments:

A reconnaissance was conducted to locate potential sample locations in an upcoming MS4 sampling inspection.

EPA New England Stormwater Outfall Inspection & Sampling Summary - Chelsea, MA 7/6/11

Location																Coordinates		YSI Meter			Weather
Date	Town	Site Name	Time	Fecal coliform (MPN/100 ml)	Entero (MPN/100ml)	Surfactants	Chlorine	NH3 (mg/l) Test St.	PPCP ng/L Atenolol	Acetaminophen	Cotinine	1,7-Dimethylxanthine	Caffeine	Sulfamethazine	Carbamazepine	GPS North(+)	GPS West (-)	Salinity ppt	Temp C	Conductivity uS	
8/16/11	N. Providence	010	8:15	2,400	250				ND	2.7	11	1 6	33	ND	ND		-71 2202638	0.4	15.8	859	Dry
8/16/11	N. Providence	015	9:40						ND	ND	3.6	7	8 3	ND	0 68						
8/16/11	N. Providence	014	10:05						ND	2.4	4.1	3.7	28	ND	1.6						
8/16/11	N. Providence	005A	11:20	4,300	2,419				ND	7	2.1	2 2	12	ND	0 84						
8/16/11	N. Providence	005B	11:15	2,400	411				ND	ND	0.74	ND	3 6	ND	ND						
8/16/11	N. Providence	005C	11:10	4 600 000	2 419				820	16000	150	4400	8500	ND	ND						
8/16/11	N. Providence	001	12:15	930	326				ND	ND	3	4	11	ND	0.78						

E. coli - color key: Red ≥ 10,000 col/100ml, Orange ≥ 1260 col/100ml, Yellow ≥ 235 col/100ml, Black < 235 col/100ml
Entero - color key: Red ≥ 1000 col/100ml, Orange ≥ 350 Yellow ≥ 61 col/100ml, Black < 61 col/100ml
NH3 - color key: Red ≥ 6 mg/L, Orange ≥ 0.5 mg/L, Yellow ≥ 0 0 mg/L
Surfactants - color key: Red ≥ 1.0 mg/L, Orange ≥ 0.5 mg/L, Yellow ≥ 0 25 mg/L, Black < 0.25 mg/L *** may give false positive at salinity greater than 1 ppt
PPCP color key: Pink = Concentrations greater than background
Cl2 - color key: Red ≥ 1.0 mg/L, Orange ≥ 0.3 mg/L, Yellow ≥ 0.02 mg/L, Black < 0.02 mg/L

REPORTING LIMITS
E. coli = 4 MPN/100mL
Enterococcus = 10 MPN/100mL
Surfactants Field = 0.1 mg/L
Ammonia Field = 0.1 mg/L

ND – not detected above the associated detection limit
NA – not applicable (analyte not tested for at that site at this time)
(~) – data reported as estimate

EPA New England Stormwater Outfall Inspection & Sampling Summary - Chelsea, MA 7/6/11

Location																Coordinates		YSI Meter			Weather
Date	Town	Site Name	Time	Fecal coliform (MPN/100 ml)	Entero (MPN/100ml)	Surfactants	Chlorine	NH3 (mg/l) Test Strip	PPCP ng/L Atenolol	Acetaminophen	Cotinine	1,7-Dimethylxanthine	Caffeine	Sulfamethazine	Carbamazepine	GPS North(+)	GPS West (-)	Salinity ppt	Temp C	Conductivity uS	
8/16/11	N. Providence	Pearl St (010)	8:15	2,400	250	0.25	0 03	0.25	ND	2.7	11	1 6	33	ND	ND		-71 2202638	0.4	15.8	859	Dry
8/16/11	N. Providence	Allendale (015)	9:40			0.13	0 04	0.00	ND	ND	3.6	7	8 3	ND	0 68						
8/16/11	N. Providence	Falco (014)	10:05			0.13	0 03	0.00	ND	2.4	4.1	3.7	28	ND	1.6						
8/16/11	N. Providence	Gillen (005-A)	11:20	4,300	2,419	0.13	0 02	0.13	ND	7	2.1	2 2	12	ND	0 84						
8/16/11	N. Providence	Gillen (005-B)	11:15	2,400	411	0.13	0 01	0.00	ND	ND	0.74	ND	3 6	ND	ND						
8/16/11	N. Providence	Gillen (005-C)	11:10	4 600 000	2 419	1.00	0 00	0.88	820	16000	150	4400	8500	ND	ND						
8/16/11	N. Providence	Vultoro (001)	12:15	930	326	0.13	0 00	0.13	ND	ND	3	4	11	ND	0.78						
11/16/11	N. Providence	David St	8:30																		
11/16/11	N. Providence	Metcalf	9:20																		
11/16/11	N. Providence	Milton	9:50																		
11/16/11	N. Providence	Falco (014-A)	10:15																		
11/16/11	N. Providence	Falco (014-B)	10:20																		
11/16/11	N. Providence	Smith	11:30																		
11/16/11	N. Providence	Brookfarm	11:50																		
11/16/11	N. Providence	Mineral Spring	12:25																		
11/16/11	N. Providence	Girard	12:30																		
11/16/11	N. Providence	Obed	12:40																		
11/16/11	N. Providence	Gillen 005-A	1:00																		
11/16/11	N. Providence	Gillen 005-B	1:03																		
11/16/11	N. Providence	Gillen 005-C	1:05																		

Surfactants - color key: Red ≥ 1.0 mg/L, Orange ≥ 0.5 mg/L, Yellow ≥ 0 25 mg/L, Black < 0.25 mg/L *** may give false positive at salinity greater than 1 ppt

PPCP color key: Pink = Concentrations greater than background

Cl2 - color key: Red ≥ 1.0 mg/L, Orange ≥ 0.3 mg/L, Yellow ≥ 0.02 mg/L, Black < 0.02 mg/L

REPORTING LIMITS

E. coli = 4 MPN/100mL

Enterococcus = 10 MPN/100mL

Surfactants Field = 0.1 mg/L

Ammonia Field = 0.1 mg/L

ND – not detected above the associated detection limit

NA – not applicable (analyte not tested for at that site at this time)

(~) – data reported as estimate

North Providence – Follow-up PPCP Sampling
Tentatively scheduled for Nov 9, 2011

Potential sampling stations:

1. Pearl Av (010)
2. Stream btw David and Spicer Sts (access from David St, behind bar and grill on Mineral Sp)
3. Stream btw Milton and Rosedale Sts, at Fruit Hill Av, op. RI College
4. Outfall nr end of driveway onWoonasquatucket Av, to left and opp. Metcalf Av, if found
5. Culverts behind Peter Blackburne, Inc, nr Falco St (014 A),
6. And Falco St (014 B) , if both pipes flowing
7. Behind Cumberland Farms @ Smith St and Rt 104, if flowing
8. Mill St, behind post office or between P.O. and Steere Av, if found
9. Brook Farm Rd (019), nr Douglas Av (Rt 7)
10. Obed St (003), off Charles St, if flowing
11. Culverts under Mineral Spring Av, if accessible
12. Gillen Av (005 C)
13. Gillen Ave (005 A, if flowing)

North Providence – Follow-up PPCP Sampling
Tentatively scheduled for Nov 9, 2011

Potential sampling stations:

1. Pearl Av (010)
2. Stream btw David and Spicer Sts (access from David St, behind bar and grill on Mineral Sp)
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5. Culverts behind Peter Blackburne, Inc, nr Falco St (014 A),
6. And Falco St (014 B) , if both pipes flowing
7. Behind Cumberland Farms @ Smith St and Rt 104, if flowing
8. Mill St, behind post office or between P.O. and Steere Av, if found
9. Brook Farm Rd (019), nr Douglas Av (Rt 7)
10. Obed St (003), off Charles St, if flowing
11. Culverts under Mineral Spring Av, if accessible
12. Gillen Av (005 C)
13. Gillen Ave (005 A, if flowing)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I

DATE: October 18, 2013

SUBJ: MS4 Reconnaissance Inspection
Town of North Providence, Rhode Island

FROM: Erin Trainor, Inspector

TO: File

REQUESTED BY: Dave Turin (OES)

I. Background Information

A. Date, Time of inspection: Tuesday, September 17, 2013, 12:00 PM

B. Weather Conditions: Sunny, approximately 60 degrees F

C. USEPA Representatives: Erin Trainor
David Turin
Denny Dart

D. Site Representative(s): Glenn J. Corrente
Department of Public Works
2 Mafalda Street
North Providence, RI 02904
Telephone: (401) 233-1440
Fax: (401) 233-1442

Note: The Site Representative was not contacted.

E. Address: Various locations associated with the outfall located at 457 Woonasquatucket Avenue as well as areas along Kristen Drive and Gillen Avenue within the Town of North Providence, Rhode Island municipal separate storm sewer system (MS4).

II. Purpose of Inspection

The purpose of the inspection was to locate potential sample areas which were identified by the Municipal Mapping Assistance Program as areas with possible illicit connections or illegal discharges that may adversely impact the water quality in the Woonasquatucket River.

III. Inspection Observations and Findings

On Tuesday, September 17, 2013, EPA inspectors David Turin, Denny Dart, and Erin Trainor met with Jennifer Stout and Eric Beck of Rhode Island Department of Environmental Management (RIDEM). Inspectors reviewed areas assessed by the Municipal Mapping Assistance Program which were recommend to EPA as potential areas to sample within the Town of North Providence based on observations collected over the course of summer 2013. Inspectors then conducted a reconnaissance inspection within the Town of North Providence at locations associated with the outfall identified as "priority outfall" located at 457 Woonasquatucket Avenue, as well as areas along Kristen Drive and Gillen Avenue.

The inspectors met with RIDEM personnel at 08:40, and the inspection started in North Providence at 12:00 PM. At the time of the inspection the weather was sunny and approximately 60 degrees Fahrenheit. According to weather underground, a rain event rain event of 0.08 inches was reported on September 16, 2013 in Providence, Rhode Island. Photographs are included at the end of this report.

End of Report

Attachments: Photographs

"Priority outfall" located at 457 Woonasquatucket Avenue. The outfall depicted on the left measures approximately 36 inches in diameter, the outfall depicted in the middle measures approximately 8 inches in diameter, and the outfall depicted on the right measures approximately 48 inches in diameter.

Paper observed downstream of the "priority outfall".

Catch basin along Woonasquatucket Avenue which leads to the 48 inch outfall at the "priority outfall". Running water was heard at catch basin.

Access manhole that leads to 36 inch outfall at the "priority outfall".

Catch basin and access manhole located at 25 Whipple Road, upstream of the "priority outfall". A trickle was heard upstream.

Catch basin located along Sampson Avenue, upstream of the "priority outfall".

Close up of standing water within catch basin located along Sampson Avenue.

View of standing water located within catch basin in front of 11 Kristen Drive.

Three outfalls located along Gillen Avenue. Note: the outfall depicted on the right has had historical contamination documented by EPA in 2011, identified as "005C".

Paper observed downstream of outfall "005C".

MUNICIPAL STORMWATER SEWER SYSTEM
NORTH PROVIDENCE, RHODE ISLAND

Sampling of Stormwater Outfalls for
Bacteria and Pharmaceuticals and Personal Care Products

Sampling & Analysis Plan (SAP)
August 2011

U.S. Environmental Protection Agency
EPA New England
Office of Environmental Measurement & Evaluation
Environmental Investigations & Analysis Unit

Project Manager: Dave Turin

Signature: _____ Date: _____

EIA Field Sampling Leader: Erin Trainor

Signature: _____ Date: 8/12/2011

EIA Field Team Leader: Jerry Keefe

Signature: _____ Date: 8/18/11

Laboratory Acceptance: Dan Boudreau

Signature: _____ Date: 8/25/11

1. **Project Name:** Sampling of Stormwater Outfalls for Bacteria and Pharmaceuticals and Personal Care Products at

2. **Project Requested By:** EPA's Office of Environmental Stewardship (OES)

3. **Date of Request:** June 7, 2011

4. **Date of Project Initiation:** August 2011

5. **Project Manager:** Dave Turin

6. **Quality Assurance Officer:** TBD

7. **Project Description**

A. Objective and Scope Statement:
The Office of Environmental Measurement & Evaluation (OEME) environmental investigations and analysis team (EIA) was requested to assist with water sampling within North Providence, Rhode Island. Utilizing the stormwater outfall sampling protocol developed by the Office of Environmental Stewardship (OES), samples will be collected from stormwater outfalls for the purpose of identifying illicit connections to stormwater system outfalls. EIA staff will sample eight outfalls located in the Town of North Providence. The outfalls will be screened in the field using test kits for ammonia, chlorine, and surfactants, and analyzed at the EPA New England Regional Laboratory (NERL) for E.Coli, Enteracoccus, and Pharmaceuticals and Personal Care Products (PPCP). Additional sampling and analysis may be performed at the discretion of EIA field staff and recorded in the site field logbook.

B. Data Usage:
Data will be used to assess levels of contamination, and to confirm the presence (or absence) of contaminants at a stormwater discharge point. Site observations, documentation, and results of sampling during these inspections will be forwarded to the OES enforcement staff for enforcement actions and information requests.

C. Sampling Event Design:
EIA will conduct the stormwater monitoring on August 16, 2011. Stormwater samples will be collected under guidance of EPA's Ambient Water Sampling Standard Operating Procedure (SOP) (ECASOP-Water1). Samples will be collected as grab samples. Stormwater samples will be field screened for ammonia under guidance of EPA's SOP for Measuring Ammonia using Ammonia 0 – 6.0mg/L (Nitrogen) Hach® 0 – 6.0mg/L Test Kit (EIASOP-Test Strip1), for chlorine under guidance of EPA's SOP for Measuring Pocket Colorimeter Analysis System Low Range (0.0 – 2.00 mg/L) - Free and Total Chlorine High Range (0.0 – 4.5 mg/L) - Total Chlorine (ECASOP-ChlorineSOP1), and for surfactants under guidance of EPA's SOP for Measuring Detergents using Detergents CHEMets 0-3 ppm Test Kit (ECASOP-DetergentsSOP1). Sample sites will be located using GPS, with an accuracy goal of $\pm$ 1 meter and Position Dilution of Precision (PDOP) less than 6. Less accurate GPS reading or coordinates from maps will be

accepted when site or other conditions do not allow ± 1 meter accuracy. EIA staff will conduct in-situ monitoring for temperature, conductivity, and dissolved oxygen (DO) using a YSI model 6 sonde under guidance of the OEME EMT SOP for YSI Model 6-Series Sondes and Data Logger SOP (ECASOP-YSISondes10) and/or another approved in situ monitor.

Field QC samples will consist of the following:

Calibration:	EPA will calibrate its sondes according to the EPA sonde calibration SOP.
Field duplicate:	One duplicate sample will be collected per sampling event or approximately for every ten samples.
Trip Blank:	OEME Chemist will run appropriate QA samples for PPCP's. One blank sample will be collected for approximately every ten bacteria samples. Reported data that is less than 5 times the trip (field) blank concentration will be flagged.
QC Criteria:	Data not meeting this criteria will be reviewed by the Project Manager. Data that does not meet laboratory QA/QC criteria will be flagged by the laboratory.

D. Monitoring Parameters and Frequency of Collection:

Parameter	Number of Samples	Sample Matrix	Lab SOP (LIMS code)	Sample Container	Sample Preservation	Holding Time
Fecal Coliform	8 + 1 field dup.	Water	ECASOP-TC/EC Colilert2	120 mL sterile	Ice to 6°C	8 hours
Enterococcus	8 + 1 field dup.	Water	ECASOP-Enterolert1	120 mL sterile	Ice to 6°C	6 hours
PPCP	8	Water	EIASOP-LCMS-STAO	1 L glass amber	Ice to 4°C (acidified in lab)	7 days to extraction 40 days after extraction

8. Schedule of Tasks and Products:

Date	Activity
June 2011	Request OEME field and lab support
August 2011	Sample Collection
August 2011	Sample analyses at NERL
September 2011	Deliver analytical results to Project Manager

9. Project Organization and Responsibility:

The following is a list of key project personnel and their responsibilities:

Responsibility	Contact
Project Officer	Dave Turin
Sampling Leader/Inspector	Erin Trainor (EIA)
Sampling QC/Inspector	Erin Trainor (EIA)
Chemistry Lead	Dan Boudreau (EIA)
Laboratory Analyses	EPA NE Lab chemistry staff
Data Evaluation/Lab QC	Dan Boudreau (EIA)
Performance Audits/QC	None requested at this time

Overall Performance Coordination Jerry Keefe (EIA)

11. Data Quality Objectives:

Accuracy and Precision values are for method internal QA/QC. The values are to be considered as goals because some specific compounds are known outside these goals.

Parameter	Sample Matrix	Reporting Limits	Accuracy [1] (%)	Precision [2] (%)
E.Coli	Water	4 col/100mL	ECASOP-TotalColiformMF2	± 100 col/100mL or 30% RPD
Enterococcus	Water	1 col/100mL	TBD	± 100 col/100mL or 30% RPD
Caffeine	Water	5.0 ng/L	TBD	< 50% RPD
1,7-DMX	Water	2.5 ng/L	TBD	< 50% RPD
Acetaminophen	Water	2.5 ng/L	TBD	< 50% RPD
Carbamazepine	Water	0.5 ng/L	TBD	< 50% RPD
Primidone	Water	5.0 ng/L	TBD	< 50% RPD
Atenolol	Water	2.5 ng/L	TBD	< 50% RPD
Cotinine	Water	0.5 ng/L	TBD	< 50% RPD
Urobilin	Water	5.0 ng/L	TBD	< 50% RPD
Azithromycin	Water	1.6 ng/L	TBD	< 50% RPD

Footnotes:

1. Accuracy is based on a lab matrix spike (MS) recovery.
2. Precision is based on a lab duplicate, matrix spike duplicate (MSD), and/or laboratory fortified blanks (LFB).

12. Data Representativeness/Comparability:

Samples must be representative of the stormwater discharges. The analytical data will be compared to Water Quality Criteria/Guideline to assess compliance. 90% of the data must be valid. If data are incomplete, the Project Manager and EIA Team Leader will determine if additional sampling is needed.

13. Sampling Procedures

Samples will be collected according to the OEME EMT SOP for Ambient Water Sampling (ECASOP-Water1). Samples will be collected as grab samples. On the occasion that field personnel determine that any of the procedures described in this SAP or SOPs are inappropriate, inadequate or impractical and that another procedure must be used to obtain a sediment or water sample, the procedure will be documented in the field log book with a description of the circumstances requiring its use.

14. Sample Custody Procedures:

Samples collected will be handled in accordance with the OEME SOP for Evidence and Sample Management (OEMESOP-EVIDENCEMANAGEMENT3). Each sample will be given a unique identification number which corresponds with the assigned monitoring well number. Samples will be handled by EIA chemistry staff according to the SOP for Sample Login, Tracking, and

Sample Disposition (EIASOP-ADMLOG15.SOP).

16. Documentation and Data Reduction, and Reporting:
All information will be recorded in the samplers log books, or on field data sheets, in addition to completion of all chain of custody forms, labels, etc. Any photographs taken will be documented in the field log book and included in the inspection report. Analytical data will be tabulated by the laboratory and reported to the Project Manager in accordance to NERL procedures and the NERL QAPP. EIA field reporting will be in accordance with EIA's report SOP [EIASOP_Report Prep_Review_Distribution]

17. Data Validation:

Data will be reviewed by routine laboratory procedures as specified in the NERL QAPP - 3/31/2010, Section 11 Data Reduction, Reporting, and Internal Verification. Data will be validated against the criteria presented in sections 7D, 11, and 12 of this SAP. Any limitations on the use of data will be documented and explained. Field data will be compiled and reviewed by the Sampling Leader and any corrective actions or issues that are needed will be brought to the EIA Team Leader.

18. Performance and Systems Audits:
May be performed by the QA Office as requested by the Project Manager.

19. Corrective Action:
Any corrective action will be determined by the Sampling Leader and documented in the field logbook as necessary and discussed with the Project Manager and EIA team leader.

20. Inspection and Analytical Reports will be sent to: Dave Turin, OES - Water Technical Unit

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

February 26, 2014

Erin Trainor - EIA / OEME
US EPA New England R1

Project Number: 14020019
Project: Providence RI, MS4
Analysis: HPLC/MS/MS Source Tracking Analysis
EPA Chemist: Peter Philbrook

Date Samples Received by the Laboratory: 02/21/2014

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIA-LCMS_STA.1.

The SOP is based on an EPA Regional Analytical Method developed at the EPA New England Laboratory.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2014.02.26 12:14:35 -05'00'

14020019$STA

Qualifiers:

RL Reporting limit

ND Not Detected above reporting limit

B Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 3X the concentration in the blank.

Providence RI, MS4

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	Niantic-1	Lab Sample ID:	AB46483
Date of Collection:	2/21/2014	Matrix:	Water
Date of Preparation:	2/24/2014	Volume Extracted (mL):	500
Date of Analysis:	2/25/2014	Extract Dilution:	1

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Cotinine	**33**	0.40	
103-90-2	Acetaminophen	**10**	2.0	
486-56-6	Atenolol	**3.2**	2.0	
611-59-6	1,7-Dimethylxanthine	**12**	2.0	
58-08-2	Caffeine	**120**	4.0	
298-46-4	Metoprolol	ND	2.0	
56392-17-7	Carbamazepine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	42	54 - 110
Sulfamethazine 13C6	80	20 - 124

Comments:

Providence RI, MS4

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Water
Date of Preparation:	2/24/2014	Volume Extracted (mL):	500
Date of Analysis:	2/25/2014	Extract Dilution:	1

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Cotinine	ND	0.40	
103-90-2	Acetaminophen	ND	2.0	
486-56-6	Atenolol	ND	2.0	
611-59-6	1,7-Dimethylxanthine	ND	2.0	
58-08-2	Caffeine	ND	4.0	
298-46-4	Metoprolol	ND	2.0	
56392-17-7	Carbamazepine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	89	54 - 110
Sulfamethazine 13C6	65	20 - 124

Comments:

Providence RI, MS4

MATRIX SPIKE (MS) RECOVERY

Sample ID: AB46483

PARAMETER	SPIKE ADDED ng/L	SAMPLE CONCENTRATION ng/L	MS CONCENTRATION ng/L	MS % REC	QC LIMITS (% REC)
1,7-Dimethylxanthine	120.0	12	148	113	13 - 174
Acetaminophen	120.0	10	88.4	65	23 - 138
Atenolol	120.0	3.2	122	99	49 - 137
Caffeine	240.0	120	372	105	31 - 156
Carbamazepine	24.0	ND	20.3	85	47 - 143
Cotinine	24.0	33	48.0	63	46 - 121
Metoprolol	120.0	ND	140	117	60 - 140

Providence RI, MS4

Laboratory Duplicate Results

Sample ID: AB46483

PARAMETER	SAMPLE RESULT ng/L	SAMPLE DUPLICATE RESULT ng/L	PRECISION RPD %	QC LIMITS
1,7-Dimethylxanthine	12	13	8.00	50
Acetaminophen	10	8.6	15.1	50
Atenolol	3.2	2.6	20.7	50
Caffeine	120	150	22.2	50
Carbamazepine	ND	ND	ND	50
Cotinine	33	35	5.88	50
Metoprolol	ND	ND	ND	50

Providence RI, MS4

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ng/L	LFB RESULT ng/L	LFB RECOVERY %	QC LIMITS %
1,7-Dimethylxanthine	120	115	96	64 - 135
Acetaminophen	120	93.1	78	48 - 122
Atenolol	120	101	84	52 - 128
Caffeine	240	222	93	68 - 126
Carbamazepine	24	23.9	100	65 - 121
Cotinine	24	24.0	100	60 - 120
Metoprolol	120	117	98	60 - 140

Comments:

Samples in Batch: AB46483

ENVIRONMENTAL PROTECTION AGENCY

REGION 1

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
1402019	Providence Mashpaug Ponds

SAMPLERS: *(Signature)*

Page 1 of 1

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	# STA	REMARKS
	2/21/14	1000		X	Niantic - 1	2	X	

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	2/21/14 1506				
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)* ESAT	Date / Time	Remarks	
			2/21/14 1306		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1402019$STA

1-19273

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

September 01, 2011

Erin Trainor - EIA / OEME
US EPA New England R1

Project Number: 11080036
Project: MS4 Outfalls -Providence, RI
Analysis: HPLC/MS/MS Source Tracking Analysis
Analyst: Peter Philbrook PeP 9/1/2011

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIA-LCMS_STA.0.

The SOP is based on an EPA Regional Analytical Method developed at the EPA New England Laboratory.

Date Samples Received by the Laboratory: 08/16/2011

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340

Sincerely,

Daniel N Boudreau 9/9/11
Daniel N Boudreau
Chemistry Team Leader

DATA QUALIFIERS

RL	Reporting limit
J	Estimated value
E	Estimated value exceeds the calibration range
L	Estimated value is below the calibration range
B	Analyte is associated with the lab blank or trip blank contamination.
R	No recovery was calculated since the analyte concentration is greater than four times the spike level.
ND	Not Detected above Reporting limit
NA	Not Applicable due to high sample dilutions or sample interferences
ME	Matrix Effect - Sample matrix was responsible for either enhanced or suppressed ionization within the electrospray ionization probe

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NARRATIVE

Aqueous samples (500mL) were extracted using a solid phase extraction (SPE) technique, following EPA Method 1694, in which samples were passed through a cartridge containing a solid sorbent material which pre-concentrates the target compounds onto the sorbent. The target compounds (TCs) were then eluted off the sorbent material using methanol. The resulting eluant is concentrated to dryness and re-constituted to a final volume of 1 mL with 20/80 Methanol/Water.

A 5uL aliquot of the sample extract was injected into a High Performance Liquid Chromatograph (HPLC), and the TCs were separated chromatographically using a C8 HPLC column running a methanol / water gradient. The ionization mode used was electrospray with the polarity operating in the positive mode. The TCs were detected using a Waters Acquity TQD Tandem Quadrupole Mass Spectrometer. The tandem quadrupole is used to perform multiple reaction monitoring (MRM) where the precursor ion of interest is fragmented to product ion(s).

Quantitation was performed by the internal standard calibration method using isotopically labeled analogues. Sulfamethazine *13*C6 and Primidone d5 were used as a surrogate compounds to monitor extraction efficiency.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

MS4 Outfalls -Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	010	Lab Sample ID:	AB20744
Date of Collection:	8/16/2011	Matrix	Water
Date of Extraction:	08/17/2011	Final Volume:	1 mL
Date of Analysis:	08/25/2011	Extract Dilution:	1
Volume Extracted:	500 mL	pH:	7.56

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Atenolol	ND	2.0	
103-90-2	Acetaminophen	**2.7**	2.0	
486-56-6	Cotinine	**11**	0.4	
611-59-6	1,7-Dimethylxanthine	**1.6**	2.0	L
58-08-2	Caffeine	**33**	4.0	
298-46-4	Carbamazepine	ND	0.4	
57-68-1	Sulfamethazine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	81	23 - 181
Sulfamethazine 13C6	36	15 - 132

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
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MS4 Outfalls -Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	015	Lab Sample ID:	AB20745
Date of Collection:	8/16/2011	Matrix	Water
Date of Extraction:	08/17/2011	Final Volume:	1 mL
Date of Analysis:	08/25/2011	Extract Dilution:	1
Volume Extracted:	500 mL	pH:	7.89

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Atenolol	ND	2.0	
103-90-2	Acetaminophen	ND	2.0	
486-56-6	Cotinine	**3.6**	0.4	
611-59-6	1,7-Dimethylxanthine	**7.0**	2.0	
58-08-2	Caffeine	**8.3**	4.0	
298-46-4	Carbamazepine	**0.68**	0.4	
57-68-1	Sulfamethazine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	98	23 - 181
Sulfamethazine 13C6	55	15 - 132

Comments:

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MS4 Outfalls -Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	014	Lab Sample ID:	AB20746
Date of Collection:	8/16/2011	Matrix	Water
Date of Extraction:	08/17/2011	Final Volume:	1 mL
Date of Analysis:	08/25/2011	Extract Dilution:	1
Volume Extracted:	500 mL	pH:	7.49

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Atenolol	ND	2.0	
103-90-2	Acetaminophen	**2.4**	2.0	
486-56-6	Cotinine	**4.1**	0.4	
611-59-6	1,7-Dimethylxanthine	**3.7**	2.0	
58-08-2	Caffeine	**28**	4.0	
298-46-4	Carbamazepine	**1.6**	0.4	
57-68-1	Sulfamethazine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	78	23 - 181
Sulfamethazine 13C6	45	15 - 132

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

MS4 Outfalls -Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	005A	Lab Sample ID:	AB20747
Date of Collection:	8/16/2011	Matrix	Water
Date of Extraction:	08/17/2011	Final Volume:	1 mL
Date of Analysis:	08/25/2011	Extract Dilution:	1
Volume Extracted:	500 mL	pH:	6.71

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Atenolol	ND	2.0	
103-90-2	Acetaminophen	**7.0**	2.0	
486-56-6	Cotinine	**2.1**	0.4	
611-59-6	1,7-Dimethylxanthine	**2.2**	2.0	
58-08-2	Caffeine	**12**	4.0	
298-46-4	Carbamazepine	**0.84**	0.4	
57-68-1	Sulfamethazine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	89	23 - 181
Sulfamethazine 13C6	46	15 - 132

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

MS4 Outfalls -Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	005B	Lab Sample ID:	AB20748
Date of Collection:	8/16/2011	Matrix	Water
Date of Extraction:	08/17/2011	Final Volume:	1 mL
Date of Analysis:	08/25/2011	Extract Dilution:	1
Volume Extracted:	500 mL	pH:	6.86

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Atenolol	ND	2.0	
103-90-2	Acetaminophen	ND	2.0	
486-56-6	Cotinine	**0.74**	0.4	
611-59-6	1,7-Dimethylxanthine	ND	2.0	
58-08-2	Caffeine	**3.6**	4.0	L
298-46-4	Carbamazepine	ND	0.4	
57-68-1	Sulfamethazine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	95	23 - 181
Sulfamethazine 13C6	57	15 - 132

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

MS4 Outfalls -Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	005C	Lab Sample ID:	AB20749
Date of Collection:	8/16/2011	Matrix	Water
Date of Extraction:	08/17/2011	Final Volume:	1 mL
Date of Analysis:	08/25/2011	Extract Dilution:	1
Volume Extracted:	500 mL	pH:	7.98

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Atenolol	**820**	20.0	
103-90-2	Acetaminophen	**16000**	200.0	
486-56-6	Cotinine	**150**	4.0	
611-59-6	1,7-Dimethylxanthine	**4400**	400.0	
58-08-2	Caffeine	**8500**	400.0	
298-46-4	Carbamazepine	ND	0.4	
57-68-1	Sulfamethazine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	96	23 - 181
Sulfamethazine 13C6	55	15 - 132

Comments: Sample was run at a 1X, 10X, and 100X dilutions.

US ENVIRONMENTAL PROTECTION AGENCY
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MS4 Outfalls -Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	001	Lab Sample ID:	AB20750
Date of Collection:	8/16/2011	Matrix	Water
Date of Extraction:	08/17/2011	Final Volume:	1 mL
Date of Analysis:	08/25/2011	Extract Dilution:	1
Volume Extracted:	460 mL	pH:	7.82

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Atenolol	ND	2.2	
103-90-2	Acetaminophen	ND	2.2	
486-56-6	Cotinine	**3.0**	0.4	
611-59-6	1,7-Dimethylxanthine	**4.0**	2.2	
58-08-2	Caffeine	**11**	4.4	
298-46-4	Carbamazepine	**0.78**	0.4	
57-68-1	Sulfamethazine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	110	23 - 181
Sulfamethazine 13C6	71	15 - 132

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

MS4 Outfalls -Providence, RI

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	Water
Date of Extraction:	08/17/2011	Final Volume:	1 mL
Date of Analysis:	08/25/2011	Extract Dilution:	1
Volume Extracted:	500 mL	pH:	6.57

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Atenolol	ND	2.0	
103-90-2	Acetaminophen	ND	2.0	
486-56-6	Cotinine	ND	0.4	
611-59-6	1,7-Dimethylxanthine	ND	2.0	
58-08-2	Caffeine	ND	4.0	
298-46-4	Carbamazepine	ND	0.4	
57-68-1	Sulfamethazine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Sulfamethazine 13C3	62	
Primidone d5	84	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
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MATRIX SPIKE RECOVERY

MS4 Outfalls -Providence, RI

Sample ID: AB20750

PARAMETER	SPIKE ADDED ng/L	SAMPLE CONCENTRATION ng/L	MS CONCENTRATION ng/L	MS % REC	QC LIMITS (% REC)
1,7-Dimethylxanthine	120	4.0	76	60.0	7 - 120
Acetaminophen	120	ND	80	66.7	1 - 120
Atenolol	120	ND	91	75.8	40 - 146
Caffeine	240	11	204	80.4	12 - 138
Carbamazepine	24	0.78	8.7	33.0	27 - 144
Cotinine	24	3.0	21	75.0	48 - 131
Sulfamethazine	24	ND	12	50.0	30 - 130

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

LABORATORY FORTIFIED BLANK (LFB) RECOVERY

MS4 Outfalls -Providence, RI

COMPOUND	SPIKE ADDED ng/L	LFB CONCENTRATION ng/L	LFB RECOVERY %	QC LIMITS (% REC)
1,7-Dimethylxanthine	120	113	94.2	14 - 155
Acetaminophen	120	98	81.7	43 - 129
Atenolol	120	107	89.2	45 - 136
Caffeine	240	205	85.4	57 - 132
Carbamazepine	24	21	87.5	39 - 136
Cotinine	24	19	79.2	60 - 127
Sulfamethazine	24	17	70.8	30 - 130

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

Sample ID: AB20702

PARAMETER	SAMPLE RESULT ng/L	SAMPLE DUPLICATE RESULT ng/L	PRECISION RPD %	QC LIMITS
1,7-Dimethylxanthine	1.7	1.1	42.9	50
Acetaminophen	ND	ND	ND	50
Atenolol	ND	ND	ND	50
Caffeine	ND	ND	ND	50
Carbamazepine	ND	ND	ND	50
Cotinine	0.51	0.53	3.85	50
Sulfamethazine	ND	ND	ND	50

ENVIRONMENTAL PROTECTION AGENCY

REGION 1

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
11080036	North Providence, RI

SAMPLERS: (Signature) Eric Paquin

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	STA	REMARKS
010	8/16/11	0815		X	(PP) ~~Allendale~~ Pearl	1	X	
015		0946		X	(PP) ~~Falco~~ Allendale	1	X	
014		1005		X	Falco	1	X	
005A		~~1020~~ 1120		X	Gillen	1	X	
005B		1115		X	Gillen	1	X	
005C		1110		X	Gillen	1	X	
001	↓	1215		X	Volpino	1	X	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Eric Paquin	8/16/11 1420				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) ESAT	Date / Time	Remarks	
			8/16/11 14.28		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

5°C

1-17405

EPA Region 1
Clean Water Act
Inspection Data Entry Form: 3560EZ

Version 1.03

Inspector:	Erin Trainor	Date form completed:	6/19/2014

Section A: Facility Information						
Inspection start date:	6/5/2014	Inspection start time:	09:05			
Inspection end date (if more than one day):	6/5/2014	Inspection finish time:	14:00			
NPDES ID:	RIR040005	Federal facility?	No			
Name and Location of Facility Inspected:						
Name:	City of Providence MS4					
Address:	Mashpaug Pond neighborhood					
City:	Providence	State:	RI	ZIP:	**02914**	
Facility Representative #1:						
Name:	Ed Sanchez	Title:	City of Providence Parks Department			
Address (if off-site):	1000 Elmwood Ave.					
City:	Providence	State:	RI	ZIP:	02907	
Phone #:	(401) 785-9450	Email:	Enter text			
Facility Representative #2 (if necessary):						
Name:	Enter text	Title:	Enter text			
Address (if off-site):	Enter text					
City:	Enter text	State:	Enter text	ZIP:	Enter text	
Phone #:	Enter text	Email:	Enter text			

Section B: Compliance Monitoring Information	
Clean Water Act Section (choose from only one of the following):	
CWA §308[A][B]: NPDES	Stormwater - MS4
CWA §311: Oil and Hazardous Substances	Choose an item
CWA §404: Permits for Dredge and Fill Material	Choose an item
Compliance Monitoring Type:	Inspection w/ Sampling
Compliance Monitoring Reason:	Agency Priority
If Agency Priority, then specify priority(s):	

OECA - CAFO	☐
OECA - CAFO Region Initiative Areas	☐
OECA - CSOs w/ < 50,000 service population	☐
OECA - CSOs w/ >= 50,000 service population	☐
OECA - MS4s Phase I	☐
OECA - MS4s Phase II	☒

OECA - SSOs ≥ 10 MGD and < 100 MGD	☐
Region 1 - Environmental Justice	☐
Region 1 - Green Economy / Green Infrastructure	☐
Region 1 - Industrial Laundries	☐
Region 1 - Lead Poisoning	☐
Region 1 - Municipal Infrastructure	☐
Region 1 - Pollution Prevention & Resource Conservation	☐
Region 1 - Ship / Boat Yards	☐
Region 1 - Wet Weather	☐

Compliance Monitoring Agency Type:	EPA
Was this a Joint Compliance Monitoring Activity?	No
If Joint, which party had the lead?	Choose an item or leave blank if N/A
If State lead, what was the purpose of EPA participation?	Choose an item or leave blank if N/A

Section C: ICDS Information	
Did you observe deficiencies (potential violations) during the inspection?	Choose an item
Potential excess emission in violation of regulations:	☐
Potential failure to… … complete or submit a notification, report, certification, or manifest:	☐
… follow a permit condition(s):	☐
… follow a required sample monitoring procedure or laboratory procedure:	☐
… follow or develop a required management practice or procedure:	☐
… identify and manage a regulated waste or pollutant in any media:	☒
… maintain a record or failure to disclose a document:	☐
… maintain/inspect/repair meters, sensors, and recording equipment:	☐
… obtain a permit, product approval, or certification:	☐
… report regulated events such as spills, accidents, etc.:	☐
Potential incorrect use of a material (pesticide, waste, product) or use of an unapproved material:	☐
Potential violation of a compliance schedule in an enforceable order:	☐
If you observed deficiencies, did you communicate the deficiencies to the Facility during the inspection?	No
If yes, did you observe the Facility take any actions during the inspection to address the deficiencies noted?	No
If yes, what actions were taken?	Choose an item
If the Facility reduced pollution, what pollutant was reduced?	Enter text
Did you provide *general compliance assistance* in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No
Did you provide *site-specific compliance assistance* in accordance with the policy on the role of the EPA inspector in providing compliance assistance during inspections?	No

Comments:

Enter text

Rhode Island Department of Health Laboratories

50 Orms Street
Providence RI 02904
Phone: (401) 222-5600 Fax: (401)

- CERTIFICATE OF ANALYSIS -

Analysis Req.
PWSID: DEM
PWS
Contact PETER C. NAUMANN
235 PROMENADE ST.
PROVIDENCE RI 02908

Collected PETER C.
Sample Collection 8/16/2011
Sample Receipt 8/16/2011
Sample Completed 8/23/2011

Today's 24-Aug-11
Lab 20110816014
SampleID 776724
Source
Facility
Sample Point
Description:
Collection PEARL ST. STREAM 010, NORTH

Analytical Method	Test	Test	Flag	Result	Units	Reporting Limit	Analysis Date
SM9221B,D							
	PRESUMPTIVE	SM01		3332000			8/16/2011
	CONFIRMED, TOTAL	SM01		3-3-3-2			8/16/2011
	FECAL COLIFORM	SM01		3-3-3-0			8/16/2011
	DILUTION CODE	SM01		B			8/16/2011
	MPN RESULT TOTAL COLIFORM	SM01		11,000			8/16/2011
	MPN RESULT FECAL COLIFORM	SM01		2,400			8/16/2011
IDEXX							
	ENTEROCCI COUNT	SM37		249.5	MPN/100M	10	8/16/2011

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Rhode Island Department of Health Laboratories

50 Orms Street
Providence RI 02904
Phone: (401) 222-5600 Fax: (401)

- CERTIFICATE OF ANALYSIS -

Analysis Req.
PWSID: DEM
PWS
Contact PETER C. NAUMANN
235 PROMENADE ST.
PROVIDENCE RI 02908

Collected PETER C.
Sample Collection 8/16/2011
Sample Receipt 8/16/2011
Sample Completed 8/23/2011

Today's 24-Aug-11
Lab 20110816015
SampleID 776725
Source
Facility
Sample Point
Description:

Collection WOONASQUATUCKET RIVER @

Analytical Method	Test	Test	Flag	Result	Units	Reporting Limit	Analysis Date
SM9221B,D							
	PRESUMPTIVE	SM01		3333000			8/16/2011
	CONFIRMED, TOTAL	SM01		3-3-3-2			8/16/2011
	FECAL COLIFORM	SM01		3-3-2-1			8/16/2011
	DILUTION CODE	SM01		B			8/16/2011
	MPN RESULT TOTAL COLIFORM	SM01		11,000			8/16/2011
	MPN RESULT FECAL COLIFORM	SM01		1,500			8/16/2011
IDEXX							
	ENTEROCCI COUNT	SM37		1,553.07	MPN/100M	10	8/16/2011

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Rhode Island Department of Health Laboratories

50 Orms Street
Providence RI 02904
Phone: (401) 222-5600 Fax: (401)

- CERTIFICATE OF ANALYSIS -

Analysis Req.
PWSID: DEM
PWS
Contact PETER C. NAUMANN
235 PROMENADE ST.
PROVIDENCE RI 02908

Collected PETER C.
Sample Collection 8/16/2011
Sample Receipt 8/16/2011
Sample Completed 8/23/2011

Today's 24-Aug-11
Lab 20110816016
SampleID 776726
Source
Facility
Sample Point
Description:
Collection WOONASQUATUCKET RIVER @

Analytical Method	Test	Test	Flag	Result	Units	Reporting Limit	Analysis Date
SM9221B,D							
	PRESUMPTIVE	SM01		3332100			8/16/2011
	CONFIRMED, TOTAL	SM01		3-3-3-2			8/16/2011
	FECAL COLIFORM	SM01		3-3-3-0-0			8/16/2011
	DILUTION CODE	SM01		B			8/16/2011
	MPN RESULT TOTAL COLIFORM	SM01		9,300			8/16/2011
	MPN RESULT FECAL COLIFORM	SM01		2,300			8/16/2011
IDEXX							
	ENTEROCCI COUNT	SM37		648.8	MPN/100M	10	8/16/2011

State Health Laboratories are certified by the US EPA for the analysis of drinking water for microbiological and chemical contaminants. The Above results and associated QC have been reviewed according to the quality assurance standards and found acceptable unless otherwise indicated below. The results in this COA have been transmitted electronically to the Office of Drinking Water Quality for determination of compliance with Rules and Regulations Pertaining to Drinking Water Supply. For Questions regarding compliance, please call 401-222-6867. Flag Explanation: H - result exceeds the standard (maximum contaminant level, secondary maximum contaiminant level or health advisory)

Rhode Island Department of Health Laboratories

50 Orms Street
Providence RI 02904
Phone: (401) 222-5600 Fax: (401)

- CERTIFICATE OF ANALYSIS -

Analysis Req.
PWSID: DEM
PWS
Contact PETER C. NAUMANN
235 PROMENADE ST.
PROVIDENCE RI 02908

Collected PETER C.
Sample Collection 8/16/2011
Sample Receipt 8/16/2011
Sample Completed 8/23/2011

Today's 24-Aug-11
Lab 20110816017
SampleID 776728
Source
Facility
Sample Point
Description:
Collection GILLEN ST. PIPE 005 A

Analytical Method	Test	Test	Flag	Result	Units	Reporting Limit	Analysis Date
SM9221B,D							
	PRESUMPTIVE	SM01		3332210			8/16/2011
	CONFIRMED, TOTAL	SM01		3-3-3-2-1-0			8/16/2011
	FECAL COLIFORM	SM01		3-3-3-1-0-0			8/16/2011
	DILUTION CODE	SM01		B			8/16/2011
	MPN RESULT TOTAL COLIFORM	SM01		15,000			8/16/2011
	MPN RESULT FECAL COLIFORM	SM01		4,300			8/16/2011
IDEXX							
	ENTEROCCI COUNT	SM37		2,419.17	MPN/100M	10	8/16/2011

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Rhode Island Department of Health Laboratories

50 Orms Street
Providence RI 02904
Phone: (401) 222-5600 Fax: (401)

- CERTIFICATE OF ANALYSIS -

Analysis Req.
PWSID: DEM
PWS
Contact PETER C. NAUMANN
235 PROMENADE ST.
PROVIDENCE RI 02908

Collected PETER C.
Sample Collection 8/16/2011
Sample Receipt 8/16/2011
Sample Completed 8/23/2011

Today's 24-Aug-11
Lab 20110816018
SampleID 776729
Source
Facility
Sample Point
Description:
Collection GILLEN ST. PIPE 005 B

Analytical Method	Test	Test	Flag	Result	Units	Reporting Limit	Analysis Date
SM9221B,D							
	PRESUMPTIVE	SM01		3331000			8/16/2011
	CONFIRMED, TOTAL	SM01		3-3-3-1			8/16/2011
	FECAL COLIFORM	SM01		3-3-3-0			8/16/2011
	DILUTION CODE	SM01		B			8/16/2011
	MPN RESULT TOTAL COLIFORM	SM01		4,600			8/16/2011
	MPN RESULT FECAL COLIFORM	SM01		2,400			8/16/2011
IDEXX							
	ENTEROCCI COUNT	SM37		410.6	MPN/100M	10	8/16/2011

State Health Laboratories are certified by the US EPA for the analysis of drinking water for microbiological and chemical contaminants. The Above results and associated QC have been reviewed according to the quality assurance standards and found acceptable unless otherwise indicated below. The results in this COA have been transmitted electronically to the Office of Drinking Water Quality for determination of compliance with Rules and Regulations Pertaining to Drinking Water Supply. For Questions regarding compliance, please call 401-222-6867. Flag Explanation: H - result exceeds the standard (maximum contaminant level, secondary maximum contaiminant level or health advisory)

Rhode Island Department of Health Laboratories

50 Orms Street
Providence RI 02904
Phone: (401) 222-5600 Fax: (401)

- CERTIFICATE OF ANALYSIS -

Analysis Req.
PWSID: DEM
PWS
Contact PETER C. NAUMANN
235 PROMENADE ST.
PROVIDENCE RI 02908

Collected PETER C.
Sample Collection 8/16/2011
Sample Receipt 8/16/2011
Sample Completed 8/23/2011

Today's 24-Aug-11
Lab 20110816019
SampleID 776730
Source
Facility
Sample Point
Description:
Collection GILLEN ST. PIPE 005 C

Analytical Method	Test	Test	Flag	Result	Units	Reporting Limit	Analysis Date
SM9221B,D							
	PRESUMPTIVE	SM01		3333333			8/16/2011
	CONFIRMED, TOTAL	SM01		3333333			8/16/2011
	FECAL COLIFORM	SM01		3333331			8/16/2011
	DILUTION CODE	SM01		B			8/16/2011
	MPN RESULT TOTAL COLIFORM	SM01		>=24,000,000			8/16/2011
	MPN RESULT FECAL COLIFORM	SM01		4,600,000			8/16/2011
IDEXX							
	ENTEROCCI COUNT	SM37		>2,419.2	MPN/100M	10	8/16/2011

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Rhode Island Department of Health Laboratories

50 Orms Street
Providence RI 02904
Phone: (401) 222-5600 Fax: (401)

- CERTIFICATE OF ANALYSIS -

Analysis Req.
PWSID: DEM
PWS
Contact PETER C. NAUMANN
235 PROMENADE ST.
PROVIDENCE RI 02908

Collected PETER C.
Sample Collection 8/16/2011
Sample Receipt 8/16/2011
Sample Completed 8/23/2011

Today's 24-Aug-11
Lab 20110816020
SampleID 776731
Source
Facility
Sample Point
Description:
Collection VOLTURNO ST. PIPE 001

Analytical Method	Test	Test	Flag	Result	Units	Reporting Limit	Analysis Date
SM9221B,D							
	PRESUMPTIVE	SM01		3331000			8/16/2011
	CONFIRMED, TOTAL	SM01		3-3-3-0			8/16/2011
	FECAL COLIFORM	SM01		3-3-2-0			8/16/2011
	DILUTION CODE	SM01		B			8/16/2011
	MPN RESULT TOTAL COLIFORM	SM01		2,400			8/16/2011
	MPN RESULT FECAL COLIFORM	SM01		930			8/16/2011
IDEXX							
	ENTEROCCI COUNT	SM37		325.5	MPN/100M	10	8/16/2011

State Health Laboratories are certified by the US EPA for the analysis of drinking water for microbiological and chemical contaminants. The Above results and associated QC have been reviewed according to the quality assurance standards and found acceptable unless otherwise indicated below. The results in this COA have been transmitted electronically to the Office of Drinking Water Quality for determination of compliance with Rules and Regulations Pertaining to Drinking Water Supply. For Questions regarding compliance, please call 401-222-6867. Flag Explanation: H - result exceeds the standard (maximum contaminant level, secondary maximum contaiminant level or health advisory)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I

DATE: July 10, 2014

SUBJ: City of Providence, Rhode Island
MS4 Compliance Inspection

FROM: Erin Trainor, Inspector

TO: File

REVIEWED BY: Dave Turin (OES) 7/10/14

REQUESTED BY: Ray Cody (OEP)

I. Background Information

A. Date, Time of inspection: Thursday, June 5, 2014, 9:05 AM

B. Weather Conditions: Overcast and cool with periods of heavy rain, approximately 60 degrees F

C. USEPA Representatives: Erin Trainor (EIA)
Ray Cody (OEP)

D. Site Representative: Edwin Sanchez
City of Providence Parks Department
1000 Elmwood Ave., Providence, RI 02907
(401) 785-9450

E. Address: Various locations within the City of Providence, Rhode Island Mashapaug Pond MS4 drainage area.

II. Purpose of Inspection

The purpose of the inspection was to determine the presence or absence of illicit connections or illegal discharges within the City of Providence Municipal Separate Stormwater Sewer System (MS4) that may adversely impact the water quality into an infiltration basin structure best management practice (BMP) which is currently being constructed within JT Owens Park. Samples were collected from two outfalls within a single access manhole in accordance with the Environmental Investigations and Analysis (EIA) unit Stormwater Program Plan.

III. Description of Sampling Location

- Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park, identified as "Niantic-E-1". Sample "Niantic-E-1" was collected from the southern outfall pipe.

- Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park, identified as "Swanton-N". Sample "Swanton-N" was collected from the southeastern outfall pipe and was assumed to represent street runoff from the north side of Swanton Street.

The following locations were inspected but not sampled:

- Access manhole located along the west side of Niantic Avenue across from the intersection with Swanson Street, identified as "Niantic-W-1". Trash/debris was removed from "Niantic-W-1" by the City of Providence Department of Public Works (DPW) at the time of inspection. "Niantic-W-1" appeared to collect only street runoff from Niantic Avenue and direct flow slightly south of "Niantic-E-1".

- Access manhole located along the south side of Swanton Street at the intersection with Niantic Avenue, identified as "Swanton-S". "Swanton-S" appeared to collect only street runoff from the south side of Swanton Street and direct flow slightly south of "Niantic-E-1".

- Access manhole located along Niantic Avenue at the intersection with Tobyhanna Street, identified as "Niantic-E-2". "Niantic-E-2" appeared to collect street runoff from Niantic Avenue as well as flows from "Niantic-W-2" (see below) and direct flow towards "Niantic-E-1".

- Access manhole located along the west side of Niantic Avenue across from the intersection with Tobyhanna Street, identified as "Niatic-W-2". "Niantic-W-2" appeared to collect street runoff from Niantic Avenue as well as flow from "Niantic-W-3" and direct flow towards "Niantic-E-2".

- Access manhole located along the north side of Tobyhanna Street at the intersection with Niantic Avenue, identified as "Tobyhanna-N". "Tobyhanna-N" appeared to collect only street runoff from the north side of Tobyhanna Street and direct flow slightly north of "Niantic-E-2".

- Access manhole located along the south side of Tobyhanna Street at the intersection with Niantic Avenue, identified as "Tobyhanna-S". "Tobyhanna-S" appeared to collect only street runoff from the south side of Tobyhanna Street and direct flow slightly north of "Niantic-E-2".

- Access manhole located along Niantic Avenue at the intersection with Togansett Street,

identified as "Niantic-E-3". "Niantic-E-3" was full of trash/debris at the time of inspection, and flow rate/direction could not be determined. DPW personnel explained the catch basins would be scheduled to be cleaned out.

- Access manhole located along the west side of Niantic Avenue across from the intersection with Togansett Road, identified as "Niantic-W-3". "Niantic-W-3" was full of trash/debris at the time of inspection, and flow rate/direction could not be determined. DPW personnel explained the catch basins would be scheduled to be cleaned out.

IV. Inspection Observations and Findings

On Thursday, June 5, 2014, EPA inspector Erin Trainor conducted a compliance sampling inspection of the Mashapaug Pond MS4 drainage area within the City of Providence at the locations described in Section III. She was accompanied by Ray Cody (OEP), Edwin Sanchez of the City of Providence Parks and Recreation Department, and D. Morel and Jose de los Santos, both of the City of Providence Department of Public Works.

The inspection started in Providence at approximately 9:05 AM. At the time of the inspection, the weather was overcast and cool, approximately 60 degrees Fahrenheit. According to www.wunderground.com, weather station KRIPROVI8, there was a trace amount of rain recorded on June 4, 2014. Approximately 0.3 inches of rain was recorded on June 5, 2014 prior to collecting a sample. Rainfall from 13:00-14:00 produced enough flow to collect a sample from the Mashapaug Pond drainage area. The recorded total rainfall from this hour is approximately 0.66 inches. The sampling area was not tidally influenced.

The City of Providence is covered under municipal NPDES permit RIR040005.

The sampling locations described in Section III analyzed at Alpha Analytical located in Westborough, Massachusetts for E.Coli, Enterococcus, and Fecal Coliform and Pharmaceutical and Personal Care Products (PPCPs) including: Atenolol, Acetaminophen, Cotinine, 1,7-Dimethylxanthine, Caffeine, Carbamazepine, and Metoprolol at the EPA New England Regional Laboratory (NERL). The following table summarizes the findings.

Summary of Providence, RI Mashapaug Pond MS4 Inspection, June 5, 2014

Sample ID	Niatic-E-1	Swanton-N
Time	13:08	13:38
Latitude/Longitude	41.792235 N, -71.437397 W	41.792235 N, -71.437397 W
Description of Location	Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park. Sample was collected from the southern outfall pipe within access manhole.	Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park. Sample was collected from the southeastern outfall pipe within access manhole.
Physical Observations	Manhole cleared of trash and debris prior to sample collection. Cigarette butts observed. Dog mass adjacent to catch basin along fence line of JT Owens Park.	Manhole cleared of trash and debris prior to sample collection. Cigarette butts observed. Dog mass adjacent to catch basin along fence line of JT Owens Park.
Atenolol, ng/l	ND	ND
Acetaminophen, ng/l	21	23
Cotinine, ng/l	38	220
1,7-Dimethylxanthine, ng/l	13	20
Caffeine, ng/l	1,700	290
Carbamazepine, ng/l	ND	ND
Metoprolol, ng/l	ND	ND
E.Coli, CFU/100ml	56,000	31,000
Enterococcus, CFU/100ml	48,000	24,000
Fecal Coliform col/100ml)	21,000	34,000

ND: not detected above laboratory reporting limits
[1] GPS coordinates estimated from Google Earth Pro.

END OF REPORT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I

DATE: July 10, 2014

SUBJ: City of Providence, Rhode Island
MS4 Compliance Inspection

FROM: Erin Trainor, Inspector

TO: File

REVIEWED BY: Dave Turin (OES) 7/10/14

REQUESTED BY: Ray Cody (OEP)

I. Background Information

A. Date, Time of inspection: Thursday, June 5, 2014, 9:05 AM

B. Weather Conditions: Overcast and cool with periods of heavy rain, approximately 60 degrees F

C. USEPA Representatives: Erin Trainor (EIA)
Ray Cody (OEP)

D. Site Representative: Edwin Sanchez
City of Providence Parks Department
1000 Elmwood Ave., Providence, RI 02907
(401) 785-9450

E. Address: Various locations within the City of Providence, Rhode Island Mashapaug Pond MS4 drainage area.

II. Purpose of Inspection

The purpose of the inspection was to determine the presence or absence of illicit connections or illegal discharges within the City of Providence Municipal Separate Stormwater Sewer System (MS4) that may adversely impact the water quality into an infiltration basin structure best management practice (BMP) which is currently being constructed within JT Owens Park. Samples were collected from two outfalls within a single access manhole in accordance with the Environmental Investigations and Analysis (EIA) unit Stormwater Program Plan.

III. Description of Sampling Location

- Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park, identified as "Niantic-E-1". Sample "Niantic-E-1" was collected from the southern outfall pipe.

- Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park, identified as "Swanton-N". Sample "Swanton-N" was collected from the southeastern outfall pipe and was assumed to represent street runoff from the north side of Swanton Street.

The following locations were inspected but not sampled:

- Access manhole located along the west side of Niantic Avenue across from the intersection with Swanson Street, identified as "Niantic-W-1". Trash/debris was removed from "Niantic-W-1" by the City of Providence Department of Public Works (DPW) at the time of inspection. "Niantic-W-1" appeared to collect only street runoff from Niantic Avenue and direct flow slightly south of "Niantic-E-1".

- Access manhole located along the south side of Swanton Street at the intersection with Niantic Avenue, identified as "Swanton-S". "Swanton-S" appeared to collect only street runoff from the south side of Swanton Street and direct flow slightly south of "Niantic-E-1".

- Access manhole located along Niantic Avenue at the intersection with Tobyhanna Street, identified as "Niantic-E-2". "Niantic-E-2" appeared to collect street runoff from Niantic Avenue as well as flows from "Niantic-W-2" (see below) and direct flow towards "Niantic-E-1".

- Access manhole located along the west side of Niantic Avenue across from the intersection with Tobyhanna Street, identified as "Niatic-W-2". "Niantic-W-2" appeared to collect street runoff from Niantic Avenue as well as flow from "Niantic-W-3" and direct flow towards "Niantic-E-2".

- Access manhole located along the north side of Tobyhanna Street at the intersection with Niantic Avenue, identified as "Tobyhanna-N". "Tobyhanna-N" appeared to collect only street runoff from the north side of Tobyhanna Street and direct flow slightly north of "Niantic-E-2".

- Access manhole located along the south side of Tobyhanna Street at the intersection with Niantic Avenue, identified as "Tobyhanna-S". "Tobyhanna-S" appeared to collect only street runoff from the south side of Tobyhanna Street and direct flow slightly north of "Niantic-E-2".

- Access manhole located along Niantic Avenue at the intersection with Togansett Street,

identified as "Niantic-E-3". "Niantic-E-3" was full of trash/debris at the time of inspection, and flow rate/direction could not be determined. DPW personnel explained the catch basins would be scheduled to be cleaned out.

- Access manhole located along the west side of Niantic Avenue across from the intersection with Togansett Road, identified as "Niantic-W-3". "Niantic-W-3" was full of trash/debris at the time of inspection, and flow rate/direction could not be determined. DPW personnel explained the catch basins would be scheduled to be cleaned out.

IV. Inspection Observations and Findings

On Thursday, June 5, 2014, EPA inspector Erin Trainor conducted a compliance sampling inspection of the Mashapaug Pond MS4 drainage area within the City of Providence at the locations described in Section III. She was accompanied by Ray Cody (OEP), Edwin Sanchez of the City of Providence Parks and Recreation Department, and D. Morel and Jose de los Santos, both of the City of Providence Department of Public Works.

The inspection started in Providence at approximately 9:05 AM. At the time of the inspection, the weather was overcast and cool, approximately 60 degrees Fahrenheit. According to www.wunderground.com, weather station KRIPROVI8, there was a trace amount of rain recorded on June 4, 2014. Approximately 0.3 inches of rain was recorded on June 5, 2014 prior to collecting a sample. Rainfall from 13:00-14:00 produced enough flow to collect a sample from the Mashapaug Pond drainage area. The recorded total rainfall from this hour is approximately 0.66 inches. The sampling area was not tidally influenced.

The City of Providence is covered under municipal NPDES permit RIR040005.

The sampling locations described in Section III analyzed at Alpha Analytical located in Westborough, Massachusetts for E.Coli, Enterococcus, and Fecal Coliform and Pharmaceutical and Personal Care Products (PPCPs) including: Atenolol, Acetaminophen, Cotinine, 1,7-Dimethylxanthine, Caffeine, Carbamazepine, and Metoprolol at the EPA New England Regional Laboratory (NERL). The following table summarizes the findings.

Summary of Providence, RI Mashapaug Pond MS4 Inspection, June 5, 2014

Sample ID	Niatic-E-1	Swanton-N
Time	13:08	13:38
Latitude/Longitude	41.792235 N, -71.437397 W	41.792235 N, -71.437397 W
Description of Location	Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park. Sample was collected from the southern outfall pipe within access manhole.	Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park. Sample was collected from the southeastern outfall pipe within access manhole.
Physical Observations	Manhole cleared of trash and debris prior to sample collection. Cigarette butts observed. Dog mass adjacent to catch basin along fence line of JT Owens Park.	Manhole cleared of trash and debris prior to sample collection. Cigarette butts observed. Dog mass adjacent to catch basin along fence line of JT Owens Park.
Atenolol, ng/l	ND	ND
Acetaminophen, ng/l	21	23
Cotinine, ng/l	38	220
1,7-Dimethylxanthine, ng/l	13	20
Caffeine, ng/l	1,700	290
Carbamazepine, ng/l	ND	ND
Metoprolol, ng/l	ND	ND
E.Coli, CFU/100ml	56,000	31,000
Enterococcus, CFU/100ml	48,000	24,000
Fecal Coliform col/100ml)	21,000	34,000

ND: not detected above laboratory reporting limits
[1] GPS coordinates estimated from Google Earth Pro.

END OF REPORT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I

DATE: July 10, 2014

SUBJ: City of Providence, Rhode Island
MS4 Compliance Inspection

FROM: Erin Trainor, Inspector

TO: File

REVIEWED BY: Dave Turin (OES) 7/10/14

REQUESTED BY: Ray Cody (OEP)

I. Background Information

A. Date, Time of inspection: Thursday, June 5, 2014, 9:05 AM

B. Weather Conditions: Overcast and cool with periods of heavy rain, approximately 60 degrees F

C. USEPA Representatives: Erin Trainor (EIA)
Ray Cody (OEP)

D. Site Representative: Edwin Sanchez
City of Providence Parks Department
1000 Elmwood Ave., Providence, RI 02907
(401) 785-9450

E. Address: Various locations within the City of Providence, Rhode Island Mashapaug Pond MS4 drainage area.

II. Purpose of Inspection

The purpose of the inspection was to determine the presence or absence of illicit connections or illegal discharges within the City of Providence Municipal Separate Stormwater Sewer System (MS4) that may adversely impact the water quality into an infiltration basin structure best management practice (BMP) which is currently being constructed within JT Owens Park. Samples were collected from two outfalls within a single access manhole in accordance with the Environmental Investigations and Analysis (EIA) unit Stormwater Program Plan.

III. Description of Sampling Location

- Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park, identified as "Niantic-E-1". Sample "Niantic-E-1" was collected from the southern outfall pipe.

- Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park, identified as "Swanton-N". Sample "Swanton-N" was collected from the southeastern outfall pipe and was assumed to represent street runoff from the north side of Swanton Street.

The following locations were inspected but not sampled:

- Access manhole located along the west side of Niantic Avenue across from the intersection with Swanson Street, identified as "Niantic-W-1". Trash/debris was removed from "Niantic-W-1" by the City of Providence Department of Public Works (DPW) at the time of inspection. "Niantic-W-1" appeared to collect only street runoff from Niantic Avenue and direct flow slightly south of "Niantic-E-1".

- Access manhole located along the south side of Swanton Street at the intersection with Niantic Avenue, identified as "Swanton-S". "Swanton-S" appeared to collect only street runoff from the south side of Swanton Street and direct flow slightly south of "Niantic-E-1".

- Access manhole located along Niantic Avenue at the intersection with Tobyhanna Street, identified as "Niantic-E-2". "Niantic-E-2" appeared to collect street runoff from Niantic Avenue as well as flows from "Niantic-W-2" (see below) and direct flow towards "Niantic-E-1".

- Access manhole located along the west side of Niantic Avenue across from the intersection with Tobyhanna Street, identified as "Niatic-W-2". "Niantic-W-2" appeared to collect street runoff from Niantic Avenue as well as flow from "Niantic-W-3" and direct flow towards "Niantic-E-2".

- Access manhole located along the north side of Tobyhanna Street at the intersection with Niantic Avenue, identified as "Tobyhanna-N". "Tobyhanna-N" appeared to collect only street runoff from the north side of Tobyhanna Street and direct flow slightly north of "Niantic-E-2".

- Access manhole located along the south side of Tobyhanna Street at the intersection with Niantic Avenue, identified as "Tobyhanna-S". "Tobyhanna-S" appeared to collect only street runoff from the south side of Tobyhanna Street and direct flow slightly north of "Niantic-E-2".

- Access manhole located along Niantic Avenue at the intersection with Togansett Street,

identified as "Niantic-E-3". "Niantic-E-3" was full of trash/debris at the time of inspection, and flow rate/direction could not be determined. DPW personnel explained the catch basins would be scheduled to be cleaned out.

- Access manhole located along the west side of Niantic Avenue across from the intersection with Togansett Road, identified as "Niantic-W-3". "Niantic-W-3" was full of trash/debris at the time of inspection, and flow rate/direction could not be determined. DPW personnel explained the catch basins would be scheduled to be cleaned out.

IV. Inspection Observations and Findings

On Thursday, June 5, 2014, EPA inspector Erin Trainor conducted a compliance sampling inspection of the Mashapaug Pond MS4 drainage area within the City of Providence at the locations described in Section III. She was accompanied by Ray Cody (OEP), Edwin Sanchez of the City of Providence Parks and Recreation Department, and D. Morel and Jose de los Santos, both of the City of Providence Department of Public Works.

The inspection started in Providence at approximately 9:05 AM. At the time of the inspection, the weather was overcast and cool, approximately 60 degrees Fahrenheit. According to www.wunderground.com, weather station KRIPROVI8, there was a trace amount of rain recorded on June 4, 2014. Approximately 0.3 inches of rain was recorded on June 5, 2014 prior to collecting a sample. Rainfall from 13:00-14:00 produced enough flow to collect a sample from the Mashapaug Pond drainage area. The recorded total rainfall from this hour is approximately 0.66 inches. The sampling area was not tidally influenced.

The City of Providence is covered under municipal NPDES permit RIR040005.

The sampling locations described in Section III analyzed at Alpha Analytical located in Westborough, Massachusetts for E.Coli, Enterococcus, and Fecal Coliform and Pharmaceutical and Personal Care Products (PPCPs) including: Atenolol, Acetaminophen, Cotinine, 1,7-Dimethylxanthine, Caffeine, Carbamazepine, and Metoprolol at the EPA New England Regional Laboratory (NERL). The following table summarizes the findings.

Summary of Providence, RI Mashapaug Pond MS4 Inspection, June 5, 2014

Sample ID	Niatic-E-1	Swanton-N
Time	13:08	13:38
Latitude/Longitude	41.792235 N, -71.437397 W	41.792235 N, -71.437397 W
Description of Location	Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park. Sample was collected from the southern outfall pipe within access manhole.	Access manhole located along Niantic Avenue at the intersection with Swanson Street, adjacent to JT Owens Park. Sample was collected from the southeastern outfall pipe within access manhole.
Physical Observations	Manhole cleared of trash and debris prior to sample collection. Cigarette butts observed. Dog mass adjacent to catch basin along fence line of JT Owens Park.	Manhole cleared of trash and debris prior to sample collection. Cigarette butts observed. Dog mass adjacent to catch basin along fence line of JT Owens Park.
Atenolol, ng/l	ND	ND
Acetaminophen, ng/l	21	23
Cotinine, ng/l	38	220
1,7-Dimethylxanthine, ng/l	13	20
Caffeine, ng/l	1,700	290
Carbamazepine, ng/l	ND	ND
Metoprolol, ng/l	ND	ND
E.Coli, CFU/100ml	56,000	31,000
Enterococcus, CFU/100ml	48,000	24,000
Fecal Coliform col/100ml)	21,000	34,000

ND: not detected above laboratory reporting limits
[1] GPS coordinates estimated from Google Earth Pro.

END OF REPORT

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

February 26, 2014

Erin Trainor - EIA / OEME
US EPA New England R1

Project Number: 14020019
Project: Providence RI, MS4
Analysis: HPLC/MS/MS Source Tracking Analysis
EPA Chemist: Peter Philbrook

Date Samples Received by the Laboratory: 02/21/2014

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIA-LCMS_STA.1.

The SOP is based on an EPA Regional Analytical Method developed at the EPA New England Laboratory.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Qualifiers:

RL Reporting limit

ND Not Detected above reporting limit

B Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 3X the concentration in the blank.

Providence RI, MS4

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	Niantic-1	Lab Sample ID:	AB46483
Date of Collection:	2/21/2014	Matrix:	Water
Date of Preparation:	2/24/2014	Volume Extracted (mL):	500
Date of Analysis:	2/25/2014	Extract Dilution:	1

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Cotinine	**33**	0.40	
103-90-2	Acetaminophen	**10**	2.0	
486-56-6	Atenolol	**3.2**	2.0	
611-59-6	1,7-Dimethylxanthine	**12**	2.0	
58-08-2	Caffeine	**120**	4.0	
298-46-4	Metoprolol	ND	2.0	
56392-17-7	Carbamazepine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	42	54 - 110
Sulfamethazine 13C6	80	20 - 124

Comments:

Providence RI, MS4

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Water
Date of Preparation:	2/24/2014	Volume Extracted (mL):	500
Date of Analysis:	2/25/2014	Extract Dilution:	1

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Cotinine	ND	0.40	
103-90-2	Acetaminophen	ND	2.0	
486-56-6	Atenolol	ND	2.0	
611-59-6	1,7-Dimethylxanthine	ND	2.0	
58-08-2	Caffeine	ND	4.0	
298-46-4	Metoprolol	ND	2.0	
56392-17-7	Carbamazepine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	89	54 - 110
Sulfamethazine 13C6	65	20 - 124

Comments:

Providence RI, MS4

MATRIX SPIKE (MS) RECOVERY

Sample ID: AB46483

PARAMETER	SPIKE ADDED ng/L	SAMPLE CONCENTRATION ng/L	MS CONCENTRATION ng/L	MS % REC	QC LIMITS (% REC)
1,7-Dimethylxanthine	120.0	12	148	113	13 - 174
Acetaminophen	120.0	10	88.4	65	23 - 138
Atenolol	120.0	3.2	122	99	49 - 137
Caffeine	240.0	120	372	105	31 - 156
Carbamazepine	24.0	ND	20.3	85	47 - 143
Cotinine	24.0	33	48.0	63	46 - 121
Metoprolol	120.0	ND	140	117	60 - 140

Providence RI, MS4

Laboratory Duplicate Results

Sample ID: AB46483

PARAMETER	SAMPLE RESULT ng/L	SAMPLE DUPLICATE RESULT ng/L	PRECISION RPD %	QC LIMITS
1,7-Dimethylxanthine	12	13	8.00	50
Acetaminophen	10	8.6	15.1	50
Atenolol	3.2	2.6	20.7	50
Caffeine	120	150	22.2	50
Carbamazepine	ND	ND	ND	50
Cotinine	33	35	5.88	50
Metoprolol	ND	ND	ND	50

Providence RI, MS4

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ng/L	LFB RESULT ng/L	LFB RECOVERY %	QC LIMITS %
1,7-Dimethylxanthine	120	115	96	64 - 135
Acetaminophen	120	93.1	78	48 - 122
Atenolol	120	101	84	52 - 128
Caffeine	240	222	93	68 - 126
Carbamazepine	24	23.9	100	65 - 121
Cotinine	24	24.0	100	60 - 120
Metoprolol	120	117	98	60 - 140

Comments:

Samples in Batch: AB46483

ENVIRONMENTAL PROTECTION AGENCY

REGION 1

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
1402019	Providence Mashpaug Ponds

SAMPLERS: *(Signature)*

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	# STA	REMARKS
	2/21/14	1000		X	Niantic - 1	2	X	

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	2/21/14 1506				
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)* ESAT	Date / Time	Remarks	
			2/21/14 13 00		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1402019$STA

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

February 26, 2014

Erin Trainor - EIA / OEME
US EPA New England R1

Project Number: 14020019
Project: Providence RI, MS4
Analysis: HPLC/MS/MS Source Tracking Analysis
EPA Chemist: Peter Philbrook

Date Samples Received by the Laboratory: 02/21/2014

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIA-LCMS_STA.1.

The SOP is based on an EPA Regional Analytical Method developed at the EPA New England Laboratory.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Qualifiers:

RL Reporting limit

ND Not Detected above reporting limit

B Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 3X the concentration in the blank.

Providence RI, MS4

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	Niantic-1	Lab Sample ID:	AB46483
Date of Collection:	2/21/2014	Matrix:	Water
Date of Preparation:	2/24/2014	Volume Extracted (mL):	500
Date of Analysis:	2/25/2014	Extract Dilution:	1

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Cotinine	**33**	0.40	
103-90-2	Acetaminophen	**10**	2.0	
486-56-6	Atenolol	**3.2**	2.0	
611-59-6	1,7-Dimethylxanthine	**12**	2.0	
58-08-2	Caffeine	**120**	4.0	
298-46-4	Metoprolol	ND	2.0	
56392-17-7	Carbamazepine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	42	54 - 110
Sulfamethazine 13C6	80	20 - 124

Comments:

Providence RI, MS4

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Water
Date of Preparation:	2/24/2014	Volume Extracted (mL):	500
Date of Analysis:	2/25/2014	Extract Dilution:	1

CAS Number	Compound	Concentration ng/L	RL ng/L	Qualifier
29122-68-7	Cotinine	ND	0.40	
103-90-2	Acetaminophen	ND	2.0	
486-56-6	Atenolol	ND	2.0	
611-59-6	1,7-Dimethylxanthine	ND	2.0	
58-08-2	Caffeine	ND	4.0	
298-46-4	Metoprolol	ND	2.0	
56392-17-7	Carbamazepine	ND	0.4	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	89	54 - 110
Sulfamethazine 13C6	65	20 - 124

Comments:

Providence RI, MS4

MATRIX SPIKE (MS) RECOVERY

Sample ID: AB46483

PARAMETER	SPIKE ADDED ng/L	SAMPLE CONCENTRATION ng/L	MS CONCENTRATION ng/L	MS % REC	QC LIMITS (% REC)
1,7-Dimethylxanthine	120.0	12	148	113	13 - 174
Acetaminophen	120.0	10	88.4	65	23 - 138
Atenolol	120.0	3.2	122	99	49 - 137
Caffeine	240.0	120	372	105	31 - 156
Carbamazepine	24.0	ND	20.3	85	47 - 143
Cotinine	24.0	33	48.0	63	46 - 121
Metoprolol	120.0	ND	140	117	60 - 140

Providence RI, MS4

Laboratory Duplicate Results

Sample ID: AB46483

PARAMETER	SAMPLE RESULT ng/L	SAMPLE DUPLICATE RESULT ng/L	PRECISION RPD %	QC LIMITS
1,7-Dimethylxanthine	12	13	8.00	50
Acetaminophen	10	8.6	15.1	50
Atenolol	3.2	2.6	20.7	50
Caffeine	120	150	22.2	50
Carbamazepine	ND	ND	ND	50
Cotinine	33	35	5.88	50
Metoprolol	ND	ND	ND	50

Providence RI, MS4

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ng/L	LFB RESULT ng/L	LFB RECOVERY %	QC LIMITS %
1,7-Dimethylxanthine	120	115	96	64 - 135
Acetaminophen	120	93.1	78	48 - 122
Atenolol	120	101	84	52 - 128
Caffeine	240	222	93	68 - 126
Carbamazepine	24	23.9	100	65 - 121
Cotinine	24	24.0	100	60 - 120
Metoprolol	120	117	98	60 - 140

Comments:

Samples in Batch: AB46483

ENVIRONMENTAL PROTECTION AGENCY

REGION 1

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
1402019	Providence Mashpaug Ponds

SAMPLERS: *(Signature)*

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	# STA	REMARKS
	2/21/14	1000		X	Niantic - 1	2	X	

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	2/21/14 1506				
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)* ESAT	Date / Time	Remarks	
			2/21/14 13 00		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1402019$STA

ANALYTICAL REPORT

Lab Number:	L1403844
Client:	U.S. EPA N.E. Regional Lab-Office of Env. Meas. 11 Technology Drive North Chelmsford, MA 01863-2431
ATTN:	Vicki Maynard
Phone:	(617) 918-8614
Project Name:	PROVIDENCE-MASHPAUG POND
Project Number:	Not Specified
Report Date:	02/25/14

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2014.02.25 15:34:33 -05'00'

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1403844
Report Date: 02/25/14

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1403844-01	NIANTIC-1	Not Specified	02/21/14 10:00

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND **Lab Number:** L1403844
Project Number: Not Specified **Report Date:** 02/25/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Cynthia McQueen

Title: Technical Director/Representative Date: 02/25/14

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

INORGANICS
&
MISCELLANEOUS

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1403844
Report Date: 02/25/14

SAMPLE RESULTS

Lab ID: L1403844-01
Client ID: NIANTIC-1
Sample Location: Not Specified
Matrix: Water

Date Collected: 02/21/14 10:00
Date Received: 02/21/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab										
Coliform, Fecal (MF)	96		col/100ml	2.0	NA	2	-	02/21/14 17:30	30,9222D	SE
E. Coli (MPN)	44		MPN/100ml	1.0	NA	1	-	02/21/14 16:25	30,9223B	SE
ENTEROCOCCUS	80		MPN/100ml	1.0	NA	1	-	02/21/14 16:30	102,ENTEROLERT	SE

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1403844
Report Date: 02/25/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab for sample(s): 01 Batch: WG671663-1										
E. Coli (MPN)	<1		MPN/100ml	1	NA	1	-	02/21/14 16:25	30,9223B	SE
Microbiological Analysis - Westborough Lab for sample(s): 01 Batch: WG671664-1										
ENTEROCOCCUS	<1		MPN/100ml	1	NA	1	-	02/21/14 16:30	102,ENTEROLERT	SE
Microbiological Analysis - Westborough Lab for sample(s): 01 Batch: WG671665-1										
Coliform, Fecal (MF)	ND		col/100ml	1.0	NA	1	-	02/21/14 17:30	30,9222D	SE

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1403844
Report Date: 02/25/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1403844-01A	Bacteria Cup unpreserved	A	N/A	4.6	Y	Absent	F-COLI-MF(.33)
L1403844-01B	Bacteria Cup unpreserved	A	N/A	4.6	Y	Absent	E-COLI-QT(.25)
L1403844-01C	Bacteria Cup unpreserved	A	N/A	4.6	Y	Absent	ENTRO-QT(.25)

*Values in parentheses indicate holding time in days

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name:	PROVIDENCE-MASHPAUG POND	**Lab Number:**	L1403844
Project Number:	Not Specified	**Report Date:**	02/25/14

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

Report Format: Data Usability Report

Project Name:	PROVIDENCE-MASHPAUG POND	**Lab Number:**	L1403844
Project Number:	Not Specified	**Report Date:**	02/25/14

Data Qualifiers

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

102 Standard Test Method for Enterococci in Water Using Enterolert (IDEXX Defined Substrate Technology), Amercian Society of Testing & Materials, ASTM D6503-99.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised December 11, 2013

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ENVIRONMENTAL PROTECTION AGENCY
REGION 1

Serial_No:02251414:39
L1403844

CHAIN OF CUSTODY RECORD

PROJ. NO.:
PROJECT NAME: Providence - Mashpaug Pond

SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Fecal Coliform	E. Coli	Enterococcus				REMARKS
	2/21/14	1006		x	Atlantic - 1	3	x	x	x				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	2/21/14 1144	[signature] 2/21/14 1144			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
				Call # 2045

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

1- 19272

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

June 17, 2014

Erin Trainor - EIA / OEME
US EPA New England R1

Project Number: 14060008
Project: MS4 Mashpaug Pond - Providence, RI
Analysis: HPLC/MS/MS Source Tracking Analysis
EPA Chemist: Peter Philbrook

Date Samples Received by the Laboratory: 06/05/2014

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIA-LCMS_STA.1.

The SOP is based on an EPA Regional Analytical Method developed at the EPA New England Laboratory.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2014.06.17 11:23:31 -04'00'

14060008$STA

Qualifiers

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J1	Estimated value due to MS recovery outside accceptance criteria
J2	Estimated value due to LFB result outside acceptance criteria
J3	Estimated value due to RPD result outside acceptance criteria
J4	Estimated value due to LCS result outside acceptance criteria
B	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 3 times the concentration in the blank.
R	No recovery was calculated since the analyte concentration is greater than four times the spike level.

MS4 Mashpaug Pond - Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	Niamtic-E-1	Lab Sample ID:	AB48755
Date of Collection:	6/05/2014	Matrix:	Water
Date of Preparation:	6/09/2014	Amount Prepared:	350 mL
Date of Analysis:	6/10/2014		

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
486-56-6	Cotinine	**38**	1	0.56	
103-90-2	Acetaminophen	**21**	1	2.8	
29122-68-7	Atenolol	ND	1	2.8	
611-59-6	1,7-Dimethylxanthine	**13**	1	2.8	
58-08-2	Caffeine	**1700**	5	28	
56392-17-7	Metoprolol	ND	1	2.8	
298-46-4	Carbamazepine	ND	1	0.56	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	75	33 - 157
Sulfamethazine 13C6	53	39 - 138

Comments:

MS4 Mashpaug Pond - Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	Swanton-N	Lab Sample ID:	AB48756
Date of Collection:	6/05/2014	Matrix:	Water
Date of Preparation:	6/09/2014	Amount Prepared:	400 mL
Date of Analysis:	6/10/2014		

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
486-56-6	Cotinine	**220**	2	1.0	
103-90-2	Acetaminophen	**23**	2	5.0	
29122-68-7	Atenolol	ND	2	5.0	
611-59-6	1,7-Dimethylxanthine	**20**	2	5.0	
58-08-2	Caffeine	**290**	2	10	
56392-17-7	Metoprolol	ND	2	5.0	
298-46-4	Carbamazepine	ND	2	1.0	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	104	33 - 157
Sulfamethazine 13C6	113	39 - 138

Comments:

MS4 Mashpaug Pond - Providence, RI

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Water
Date of Preparation:	6/09/2014	Amount Prepared:	500 mL
Date of Analysis:	6/10/2014		

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
29122-68-7	Cotinine	ND	1	0.40	
103-90-2	Acetaminophen	ND	1	2.0	
486-56-6	Atenolol	ND	1	2.0	
611-59-6	1,7-Dimethylxanthine	ND	1	2.0	
58-08-2	Caffeine	ND	1	4.0	
298-46-4	Metoprolol	ND	1	2.0	
56392-17-7	Carbamazepine	ND	1	0.40	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	93	33 - 157
Sulfamethazine 13C6	81	39 - 138

Comments:

Matrix Spike Recovery

MS4 Mashpaug Pond - Providence, RI

Sample ID: AB48756

PARAMETER	SPIKE ADDED ng/L	SAMPLE CONCENTRATION ng/L	MS CONCENTRATION ng/L	MS % REC	QC LIMITS (% REC)
1,7-Dimethylxanthine	150.0	20	110	60	13 - 174
Acetaminophen	150.0	23	175	101	23 - 138
Atenolol	150.0	ND	188	125	49 - 137
Caffeine	300.0	290	577	96	31 - 156
Carbamazepine	30.0	ND	33.2	111	47 - 143
Cotinine	30.0	220	240	67	46 - 121
Metoprolol	150.0	ND	168	112	60 - 140

Comments:

Laboratory Duplicate Results

Sample ID: AB48755

PARAMETER	SAMPLE RESULT ng/L	SAMPLE DUPLICATE RESULT ng/L	PRECISION RPD %	QC LIMITS
1,7-Dimethylxanthine	13	14	7.41	50
Acetaminophen	21	20	4.88	50
Atenolol	ND	ND	ND	50
Caffeine	1700	1700	0.00	50
Carbamazepine	ND	ND	ND	50
Cotinine	38	36	5.41	50
Metoprolol	ND	ND	ND	50

MS4 Mashpaug Pond - Providence, RI

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ng/L	LFB RESULT ng/L	LFB RECOVERY %	QC LIMITS %
1,7-Dimethylxanthine	600	478	80	64 - 135
Acetaminophen	600	542	90	48 - 122
Atenolol	600	422	70	52 - 128
Caffeine	1200	1124	94	68 - 126
Carbamazepine	120	102	85	65 - 121
Cotinine	120	117	98	60 - 120
Metoprolol	600	578	96	60 - 140

Comments:

Samples in Batch: AB48755, AB48756

ENVIRONMENTAL PROTECTION AGENCY

REGION 1

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
14060008	Providence, RI - Mashapaug Pond MS4

SAMPLERS: *(Signature)*

Page 1 of 1

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	5 STM - 1L Amber glass						REMARKS
	6/5/14	1308		X	Niantic-E1	1	X						
	6/5/14	1338		X	Swanton-H	1	X						

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	6/5/14 1605				
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks	
		ESAT	6/5/14 16:05		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1-

ANALYTICAL REPORT

Lab Number:	L1412197
Client:	U.S. EPA N.E. Regional Lab-Office of Env. Meas. 11 Technology Drive North Chelmsford, MA 01863-2431
ATTN:	Dan Boudreau
Phone:	(617) 918-8340
Project Name:	PROVIDENCE, RI-MASHPAUG POND
Project Number:	Not Specified
Report Date:	06/09/14

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2014.06.16 09:08:01 -04'00'

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1412197
Report Date: 06/09/14

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1412197-01	NIANTIC-E-1	Not Specified	06/05/14 13:08
L1412197-02	SWANTON-N	Not Specified	06/05/14 13:38

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Lisa Westerlind

Title: Technical Director/Representative Date: 06/09/14

INORGANICS
&
MISCELLANEOUS

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1412197
Report Date: 06/09/14

SAMPLE RESULTS

Lab ID: L1412197-01
Client ID: NIANTIC-E-1
Sample Location: Not Specified
Matrix: Water
Date Collected: 06/05/14 13:08
Date Received: 06/05/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab										
Coliform, Fecal (MF)	21000		col/100ml	1000	NA	1000	-	06/05/14 17:35	30,9222D	SE
E. Coli (MPN)	56000		MPN/100ml	500	NA	500	-	06/05/14 16:10	30,9223B	SE
ENTEROCOCCUS	48000		MPN/100ml	500	NA	500	-	06/05/14 17:10	102,ENTEROLERT	SE

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1412197
Report Date: 06/09/14

SAMPLE RESULTS

Lab ID: L1412197-02
Client ID: SWANTON-N
Sample Location: Not Specified
Matrix: Water
Date Collected: 06/05/14 13:38
Date Received: 06/05/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab										
Coliform, Fecal (MF)	34000		col/100ml	1000	NA	1000	-	06/05/14 17:35	30,9222D	SE
E. Coli (MPN)	31000		MPN/100ml	500	NA	500	-	06/05/14 16:10	30,9223B	SE
ENTEROCOCCUS	24000		MPN/100ml	10	NA	10	-	06/05/14 17:10	102,ENTEROLERT	SE

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1412197
Report Date: 06/09/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab for sample(s): 01-02 Batch: WG695493-1										
E. Coli (MPN)	<1		MPN/100ml	1	NA	1	-	06/05/14 16:10	30,9223B	SE
Microbiological Analysis - Westborough Lab for sample(s): 01-02 Batch: WG695496-1										
ENTEROCOCCUS	<1		MPN/100ml	1	NA	1	-	06/05/14 17:10	102,ENTEROLERT	SE
Microbiological Analysis - Westborough Lab for sample(s): 01-02 Batch: WG695498-1										
Coliform, Fecal (MF)	ND		col/100ml	1.0	NA	1	-	06/05/14 17:35	30,9222D	SE

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1412197
Report Date: 06/09/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1412197-01A	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	E-COLI-QT(.25)
L1412197-01B	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	ENTRO-QT(.25)
L1412197-01C	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	F-COLI-MF(.33)
L1412197-02A	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	E-COLI-QT(.25)
L1412197-02B	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	ENTRO-QT(.25)
L1412197-02C	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	F-COLI-MF(.33)

*Values in parentheses indicate holding time in days

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

Report Format: Data Usability Report

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

Data Qualifiers

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

102 Standard Test Method for Enterococci in Water Using Enterolert (IDEXX Defined Substrate Technology), Amercian Society of Testing & Materials, ASTM D6503-99.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised April 15, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ENVIRONMENTAL PROTECTION AGENCY

REGION 1

Serial_No:06091418:26

L1412197

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS	E.Coli by QT	Enterococcus by QT	Fecal Coliform by QT				REMARKS
	Providence, RI - Mashpaug Pond MS4								

SAMPLERS: *(Signature)*

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	6/9/14	1308		X	Mignific - E-1	3	X	X	X				
	6/9/14	1338		X	Swanton - N	3	X	X	X				

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	6/5/14 1500	6/5/14 1500			
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks	
				Call # 2050	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1- 19207

ANALYTICAL REPORT

Lab Number:	L1403844
Client:	U.S. EPA N.E. Regional Lab-Office of Env. Meas. 11 Technology Drive North Chelmsford, MA 01863-2431
ATTN:	Vicki Maynard
Phone:	(617) 918-8614
Project Name:	PROVIDENCE-MASHPAUG POND
Project Number:	Not Specified
Report Date:	02/25/14

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2014.02.25 15:34:33 -05'00'

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1403844
Report Date: 02/25/14

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1403844-01	NIANTIC-1	Not Specified	02/21/14 10:00

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND **Lab Number:** L1403844
Project Number: Not Specified **Report Date:** 02/25/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Cynthia McQueen

Title: Technical Director/Representative Date: 02/25/14

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

INORGANICS
&
MISCELLANEOUS

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1403844
Report Date: 02/25/14

SAMPLE RESULTS

Lab ID: L1403844-01
Client ID: NIANTIC-1
Sample Location: Not Specified
Matrix: Water

Date Collected: 02/21/14 10:00
Date Received: 02/21/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab										
Coliform, Fecal (MF)	96		col/100ml	2.0	NA	2	-	02/21/14 17:30	30,9222D	SE
E. Coli (MPN)	44		MPN/100ml	1.0	NA	1	-	02/21/14 16:25	30,9223B	SE
ENTEROCOCCUS	80		MPN/100ml	1.0	NA	1	-	02/21/14 16:30	102,ENTEROLERT	SE

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1403844
Report Date: 02/25/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab for sample(s): 01 Batch: WG671663-1										
E. Coli (MPN)	<1		MPN/100ml	1	NA	1	-	02/21/14 16:25	30,9223B	SE
Microbiological Analysis - Westborough Lab for sample(s): 01 Batch: WG671664-1										
ENTEROCOCCUS	<1		MPN/100ml	1	NA	1	-	02/21/14 16:30	102,ENTEROLERT	SE
Microbiological Analysis - Westborough Lab for sample(s): 01 Batch: WG671665-1										
Coliform, Fecal (MF)	ND		col/100ml	1.0	NA	1	-	02/21/14 17:30	30,9222D	SE

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1403844
Report Date: 02/25/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1403844-01A	Bacteria Cup unpreserved	A	N/A	4.6	Y	Absent	F-COLI-MF(.33)
L1403844-01B	Bacteria Cup unpreserved	A	N/A	4.6	Y	Absent	E-COLI-QT(.25)
L1403844-01C	Bacteria Cup unpreserved	A	N/A	4.6	Y	Absent	ENTRO-QT(.25)

*Values in parentheses indicate holding time in days

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name:	PROVIDENCE-MASHPAUG POND	**Lab Number:**	L1403844
Project Number:	Not Specified	**Report Date:**	02/25/14

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

Report Format: Data Usability Report

Project Name:	PROVIDENCE-MASHPAUG POND	**Lab Number:**	L1403844
Project Number:	Not Specified	**Report Date:**	02/25/14

Data Qualifiers

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

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S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

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Last revised December 11, 2013

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EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

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EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:02251414:39
L1403844

ENVIRONMENTAL PROTECTION AGENCY
REGION 1

CHAIN OF CUSTODY RECORD

PROJ. NO.:

PROJECT NAME: Providence - Mashpaug Pond

SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	Fecal Coliform	E. Coli.	Enterococcus				REMARKS
	2/21/14	1006		X	Atlantic - 1	3	X	X	X				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	2/21/14 1144	[signature] 2/21/14 1144			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
				Call # 2045

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

1- 19272

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

June 17, 2014

Erin Trainor - EIA / OEME
US EPA New England R1

Project Number: 14060008
Project: MS4 Mashpaug Pond - Providence, RI
Analysis: HPLC/MS/MS Source Tracking Analysis
EPA Chemist: Peter Philbrook

Date Samples Received by the Laboratory: 06/05/2014

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIA-LCMS_STA.1.

The SOP is based on an EPA Regional Analytical Method developed at the EPA New England Laboratory.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2014.06.17 11:23:31 -04'00'

14060008$STA

Qualifiers

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J1	Estimated value due to MS recovery outside accceptance criteria
J2	Estimated value due to LFB result outside acceptance criteria
J3	Estimated value due to RPD result outside acceptance criteria
J4	Estimated value due to LCS result outside acceptance criteria
B	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 3 times the concentration in the blank.
R	No recovery was calculated since the analyte concentration is greater than four times the spike level.

MS4 Mashpaug Pond - Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	Niamtic-E-1	Lab Sample ID:	AB48755
Date of Collection:	6/05/2014	Matrix:	Water
Date of Preparation:	6/09/2014	Amount Prepared:	350 mL
Date of Analysis:	6/10/2014		

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
486-56-6	Cotinine	**38**	1	0.56	
103-90-2	Acetaminophen	**21**	1	2.8	
29122-68-7	Atenolol	ND	1	2.8	
611-59-6	1,7-Dimethylxanthine	**13**	1	2.8	
58-08-2	Caffeine	**1700**	5	28	
56392-17-7	Metoprolol	ND	1	2.8	
298-46-4	Carbamazepine	ND	1	0.56	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	75	33 - 157
Sulfamethazine 13C6	53	39 - 138

Comments:

MS4 Mashpaug Pond - Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	Swanton-N	Lab Sample ID:	AB48756
Date of Collection:	6/05/2014	Matrix:	Water
Date of Preparation:	6/09/2014	Amount Prepared:	400 mL
Date of Analysis:	6/10/2014		

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
486-56-6	Cotinine	**220**	2	1.0	
103-90-2	Acetaminophen	**23**	2	5.0	
29122-68-7	Atenolol	ND	2	5.0	
611-59-6	1,7-Dimethylxanthine	**20**	2	5.0	
58-08-2	Caffeine	**290**	2	10	
56392-17-7	Metoprolol	ND	2	5.0	
298-46-4	Carbamazepine	ND	2	1.0	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	104	33 - 157
Sulfamethazine 13C6	113	39 - 138

Comments:

MS4 Mashpaug Pond - Providence, RI

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Water
Date of Preparation:	6/09/2014	Amount Prepared:	500 mL
Date of Analysis:	6/10/2014		

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
29122-68-7	Cotinine	ND	1	0.40	
103-90-2	Acetaminophen	ND	1	2.0	
486-56-6	Atenolol	ND	1	2.0	
611-59-6	1,7-Dimethylxanthine	ND	1	2.0	
58-08-2	Caffeine	ND	1	4.0	
298-46-4	Metoprolol	ND	1	2.0	
56392-17-7	Carbamazepine	ND	1	0.40	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	93	33 - 157
Sulfamethazine 13C6	81	39 - 138

Comments:

Matrix Spike Recovery

MS4 Mashpaug Pond - Providence, RI

Sample ID: AB48756

PARAMETER	SPIKE ADDED ng/L	SAMPLE CONCENTRATION ng/L	MS CONCENTRATION ng/L	MS % REC	QC LIMITS (% REC)
1,7-Dimethylxanthine	150.0	20	110	60	13 - 174
Acetaminophen	150.0	23	175	101	23 - 138
Atenolol	150.0	ND	188	125	49 - 137
Caffeine	300.0	290	577	96	31 - 156
Carbamazepine	30.0	ND	33.2	111	47 - 143
Cotinine	30.0	220	240	67	46 - 121
Metoprolol	150.0	ND	168	112	60 - 140

Comments:

Laboratory Duplicate Results

Sample ID: AB48755

PARAMETER	SAMPLE RESULT ng/L	SAMPLE DUPLICATE RESULT ng/L	PRECISION RPD %	QC LIMITS
1,7-Dimethylxanthine	13	14	7.41	50
Acetaminophen	21	20	4.88	50
Atenolol	ND	ND	ND	50
Caffeine	1700	1700	0.00	50
Carbamazepine	ND	ND	ND	50
Cotinine	38	36	5.41	50
Metoprolol	ND	ND	ND	50

MS4 Mashpaug Pond - Providence, RI

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ng/L	LFB RESULT ng/L	LFB RECOVERY %	QC LIMITS %
1,7-Dimethylxanthine	600	478	80	64 - 135
Acetaminophen	600	542	90	48 - 122
Atenolol	600	422	70	52 - 128
Caffeine	1200	1124	94	68 - 126
Carbamazepine	120	102	85	65 - 121
Cotinine	120	117	98	60 - 120
Metoprolol	600	578	96	60 - 140

Comments:

Samples in Batch: AB48755, AB48756

ENVIRONMENTAL PROTECTION AGENCY

REGION 1

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
14060008	Providence, RI - Mashapaug Pond MS4

SAMPLERS: *(Signature)*

Page 1 of 1

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	5 STM - 1L Amber glass						REMARKS
	6/5/14	1308		X	Niantic-E1	1	X						
	6/5/14	1338		X	Swanton-H	1	X						

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	6/5/14 1605				
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks	
		ESAT	6/5/14 16:05		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1-

ANALYTICAL REPORT

Lab Number:	L1412197
Client:	U.S. EPA N.E. Regional Lab-Office of Env. Meas. 11 Technology Drive North Chelmsford, MA 01863-2431
ATTN:	Dan Boudreau
Phone:	(617) 918-8340
Project Name:	PROVIDENCE, RI-MASHPAUG POND
Project Number:	Not Specified
Report Date:	06/09/14

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2014.06.16 09:08:01 -04'00'

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1412197
Report Date: 06/09/14

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1412197-01	NIANTIC-E-1	Not Specified	06/05/14 13:08
L1412197-02	SWANTON-N	Not Specified	06/05/14 13:38

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Lisa Westerlind

Title: Technical Director/Representative Date: 06/09/14

INORGANICS
&
MISCELLANEOUS

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1412197
Report Date: 06/09/14

SAMPLE RESULTS

Lab ID: L1412197-01
Client ID: NIANTIC-E-1
Sample Location: Not Specified
Matrix: Water
Date Collected: 06/05/14 13:08
Date Received: 06/05/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab										
Coliform, Fecal (MF)	21000		col/100ml	1000	NA	1000	-	06/05/14 17:35	30,9222D	SE
E. Coli (MPN)	56000		MPN/100ml	500	NA	500	-	06/05/14 16:10	30,9223B	SE
ENTEROCOCCUS	48000		MPN/100ml	500	NA	500	-	06/05/14 17:10	102,ENTEROLERT	SE

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1412197
Report Date: 06/09/14

SAMPLE RESULTS

Lab ID: L1412197-02
Client ID: SWANTON-N
Sample Location: Not Specified
Matrix: Water
Date Collected: 06/05/14 13:38
Date Received: 06/05/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab										
Coliform, Fecal (MF)	34000		col/100ml	1000	NA	1000	-	06/05/14 17:35	30,9222D	SE
E. Coli (MPN)	31000		MPN/100ml	500	NA	500	-	06/05/14 16:10	30,9223B	SE
ENTEROCOCCUS	24000		MPN/100ml	10	NA	10	-	06/05/14 17:10	102,ENTEROLERT	SE

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1412197
Report Date: 06/09/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab for sample(s): 01-02 Batch: WG695493-1										
E. Coli (MPN)	<1		MPN/100ml	1	NA	1	-	06/05/14 16:10	30,9223B	SE
Microbiological Analysis - Westborough Lab for sample(s): 01-02 Batch: WG695496-1										
ENTEROCOCCUS	<1		MPN/100ml	1	NA	1	-	06/05/14 17:10	102,ENTEROLERT	SE
Microbiological Analysis - Westborough Lab for sample(s): 01-02 Batch: WG695498-1										
Coliform, Fecal (MF)	ND		col/100ml	1.0	NA	1	-	06/05/14 17:35	30,9222D	SE

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1412197
Report Date: 06/09/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1412197-01A	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	E-COLI-QT(.25)
L1412197-01B	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	ENTRO-QT(.25)
L1412197-01C	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	F-COLI-MF(.33)
L1412197-02A	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	E-COLI-QT(.25)
L1412197-02B	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	ENTRO-QT(.25)
L1412197-02C	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	F-COLI-MF(.33)

*Values in parentheses indicate holding time in days

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

Report Format: Data Usability Report

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

Data Qualifiers

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

102 Standard Test Method for Enterococci in Water Using Enterolert (IDEXX Defined Substrate Technology), Amercian Society of Testing & Materials, ASTM D6503-99.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised April 15, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ENVIRONMENTAL PROTECTION AGENCY

REGION 1

Serial_No:06091418:26

L1412197

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS	E.Coli by QT	Enterococcus by QT	Fecal Coliform by QT				REMARKS
	Providence, RI - Mashpaug Pond MS4								

SAMPLERS: *(Signature)*

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	6/9/14	1308		X	Mignific - E-1	3	X	X	X				
	6/9/14	1338		X	Swanton - N	3	X	X	X				

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	6/5/14 1500	6/5/14 1500			
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks	
				Call # 2050	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1- 19207

ANALYTICAL REPORT

Lab Number:	L1403844
Client:	U.S. EPA N.E. Regional Lab-Office of Env. Meas. 11 Technology Drive North Chelmsford, MA 01863-2431
ATTN:	Vicki Maynard
Phone:	(617) 918-8614
Project Name:	PROVIDENCE-MASHPAUG POND
Project Number:	Not Specified
Report Date:	02/25/14

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2014.02.25 15:34:33 -05'00'

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1403844
Report Date: 02/25/14

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1403844-01	NIANTIC-1	Not Specified	02/21/14 10:00

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND **Lab Number:** L1403844
Project Number: Not Specified **Report Date:** 02/25/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Cynthia McQueen

Title: Technical Director/Representative Date: 02/25/14

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

INORGANICS
&
MISCELLANEOUS

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1403844
Report Date: 02/25/14

SAMPLE RESULTS

Lab ID: L1403844-01
Client ID: NIANTIC-1
Sample Location: Not Specified
Matrix: Water

Date Collected: 02/21/14 10:00
Date Received: 02/21/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab										
Coliform, Fecal (MF)	96		col/100ml	2.0	NA	2	-	02/21/14 17:30	30,9222D	SE
E. Coli (MPN)	44		MPN/100ml	1.0	NA	1	-	02/21/14 16:25	30,9223B	SE
ENTEROCOCCUS	80		MPN/100ml	1.0	NA	1	-	02/21/14 16:30	102,ENTEROLERT	SE

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14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1403844
Report Date: 02/25/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab for sample(s): 01 Batch: WG671663-1										
E. Coli (MPN)	<1		MPN/100ml	1	NA	1	-	02/21/14 16:25	30,9223B	SE
Microbiological Analysis - Westborough Lab for sample(s): 01 Batch: WG671664-1										
ENTEROCOCCUS	<1		MPN/100ml	1	NA	1	-	02/21/14 16:30	102,ENTEROLERT	SE
Microbiological Analysis - Westborough Lab for sample(s): 01 Batch: WG671665-1										
Coliform, Fecal (MF)	ND		col/100ml	1.0	NA	1	-	02/21/14 17:30	30,9222D	SE

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name: PROVIDENCE-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1403844
Report Date: 02/25/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1403844-01A	Bacteria Cup unpreserved	A	N/A	4.6	Y	Absent	F-COLI-MF(.33)
L1403844-01B	Bacteria Cup unpreserved	A	N/A	4.6	Y	Absent	E-COLI-QT(.25)
L1403844-01C	Bacteria Cup unpreserved	A	N/A	4.6	Y	Absent	ENTRO-QT(.25)

*Values in parentheses indicate holding time in days

14020019ENTERO_S
14020019FCMF_S
14020019ECMF_S

Project Name:	PROVIDENCE-MASHPAUG POND	**Lab Number:**	L1403844
Project Number:	Not Specified	**Report Date:**	02/25/14

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

Report Format: Data Usability Report

Project Name:	PROVIDENCE-MASHPAUG POND	**Lab Number:**	L1403844
Project Number:	Not Specified	**Report Date:**	02/25/14

Data Qualifiers

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

102 Standard Test Method for Enterococci in Water Using Enterolert (IDEXX Defined Substrate Technology), Amercian Society of Testing & Materials, ASTM D6503-99.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised December 11, 2013

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ENVIRONMENTAL PROTECTION AGENCY
REGION 1

Serial_No:02251414:39
L1403844

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME													
	Providence - Mashpaug Pond													
SAMPLERS: *(Signature)*														
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Fecal Coliform	E. Coli	Enterococcus				REMARKS
	2/21/14	1006		X	Hiantic - 1	3	X	X	X				

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
[signature]	2/21/14 1144	[signature] 2/21/14 1144			
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks Call # 2045	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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1- 19272

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

June 17, 2014

Erin Trainor - EIA / OEME
US EPA New England R1

Project Number: 14060008
Project: MS4 Mashpaug Pond - Providence, RI
Analysis: HPLC/MS/MS Source Tracking Analysis
EPA Chemist: Peter Philbrook

Date Samples Received by the Laboratory: 06/05/2014

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIA-LCMS_STA.1.

The SOP is based on an EPA Regional Analytical Method developed at the EPA New England Laboratory.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2014.06.17 11:23:31 -04'00'

14060008$STA

Qualifiers

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J1	Estimated value due to MS recovery outside accceptance criteria
J2	Estimated value due to LFB result outside acceptance criteria
J3	Estimated value due to RPD result outside acceptance criteria
J4	Estimated value due to LCS result outside acceptance criteria
B	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 3 times the concentration in the blank.
R	No recovery was calculated since the analyte concentration is greater than four times the spike level.

MS4 Mashpaug Pond - Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	Niamtic-E-1	Lab Sample ID:	AB48755
Date of Collection:	6/05/2014	Matrix:	Water
Date of Preparation:	6/09/2014	Amount Prepared:	350 mL
Date of Analysis:	6/10/2014		

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
486-56-6	Cotinine	**38**	1	0.56	
103-90-2	Acetaminophen	**21**	1	2.8	
29122-68-7	Atenolol	ND	1	2.8	
611-59-6	1,7-Dimethylxanthine	**13**	1	2.8	
58-08-2	Caffeine	**1700**	5	28	
56392-17-7	Metoprolol	ND	1	2.8	
298-46-4	Carbamazepine	ND	1	0.56	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	75	33 - 157
Sulfamethazine 13C6	53	39 - 138

Comments:

MS4 Mashpaug Pond - Providence, RI

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	Swanton-N	Lab Sample ID:	AB48756
Date of Collection:	6/05/2014	Matrix:	Water
Date of Preparation:	6/09/2014	Amount Prepared:	400 mL
Date of Analysis:	6/10/2014		

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
486-56-6	Cotinine	**220**	2	1.0	
103-90-2	Acetaminophen	**23**	2	5.0	
29122-68-7	Atenolol	ND	2	5.0	
611-59-6	1,7-Dimethylxanthine	**20**	2	5.0	
58-08-2	Caffeine	**290**	2	10	
56392-17-7	Metoprolol	ND	2	5.0	
298-46-4	Carbamazepine	ND	2	1.0	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	104	33 - 157
Sulfamethazine 13C6	113	39 - 138

Comments:

MS4 Mashpaug Pond - Providence, RI

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Water
Date of Preparation:	6/09/2014	Amount Prepared:	500 mL
Date of Analysis:	6/10/2014		

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
29122-68-7	Cotinine	ND	1	0.40	
103-90-2	Acetaminophen	ND	1	2.0	
486-56-6	Atenolol	ND	1	2.0	
611-59-6	1,7-Dimethylxanthine	ND	1	2.0	
58-08-2	Caffeine	ND	1	4.0	
298-46-4	Metoprolol	ND	1	2.0	
56392-17-7	Carbamazepine	ND	1	0.40	

Surrogate Compounds	Recoveries (%)	QC Ranges
Primidone d5	93	33 - 157
Sulfamethazine 13C6	81	39 - 138

Comments:

Matrix Spike Recovery

MS4 Mashpaug Pond - Providence, RI

Sample ID: AB48756

PARAMETER	SPIKE ADDED ng/L	SAMPLE CONCENTRATION ng/L	MS CONCENTRATION ng/L	MS % REC	QC LIMITS (% REC)
1,7-Dimethylxanthine	150.0	20	110	60	13 - 174
Acetaminophen	150.0	23	175	101	23 - 138
Atenolol	150.0	ND	188	125	49 - 137
Caffeine	300.0	290	577	96	31 - 156
Carbamazepine	30.0	ND	33.2	111	47 - 143
Cotinine	30.0	220	240	67	46 - 121
Metoprolol	150.0	ND	168	112	60 - 140

Comments:

Laboratory Duplicate Results

Sample ID: AB48755

PARAMETER	SAMPLE RESULT ng/L	SAMPLE DUPLICATE RESULT ng/L	PRECISION RPD %	QC LIMITS
1,7-Dimethylxanthine	13	14	7.41	50
Acetaminophen	21	20	4.88	50
Atenolol	ND	ND	ND	50
Caffeine	1700	1700	0.00	50
Carbamazepine	ND	ND	ND	50
Cotinine	38	36	5.41	50
Metoprolol	ND	ND	ND	50

MS4 Mashpaug Pond - Providence, RI

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ng/L	LFB RESULT ng/L	LFB RECOVERY %	QC LIMITS %
1,7-Dimethylxanthine	600	478	80	64 - 135
Acetaminophen	600	542	90	48 - 122
Atenolol	600	422	70	52 - 128
Caffeine	1200	1124	94	68 - 126
Carbamazepine	120	102	85	65 - 121
Cotinine	120	117	98	60 - 120
Metoprolol	600	578	96	60 - 140

Comments:

Samples in Batch: AB48755, AB48756

ENVIRONMENTAL PROTECTION AGENCY

REGION 1

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
14060008	Providence, RI - Mashapaug Pond MS4

SAMPLERS: *(Signature)*

Page 1 of 1

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	5 STM - 1L Amber glass						REMARKS
	6/5/14	1308		X	Niantic-E1	1	X						
	6/5/14	1338		X	Swanton-H	1	X						

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	6/5/14 1605				
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks	
		ESAT	6/5/14 16:05		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1-

ANALYTICAL REPORT

Lab Number:	L1412197
Client:	U.S. EPA N.E. Regional Lab-Office of Env. Meas. 11 Technology Drive North Chelmsford, MA 01863-2431
ATTN:	Dan Boudreau
Phone:	(617) 918-8340
Project Name:	PROVIDENCE, RI-MASHPAUG POND
Project Number:	Not Specified
Report Date:	06/09/14

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2014.06.16 09:08:01 -04'00'

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1412197
Report Date: 06/09/14

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1412197-01	NIANTIC-E-1	Not Specified	06/05/14 13:08
L1412197-02	SWANTON-N	Not Specified	06/05/14 13:38

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Lisa Westerlind

Title: Technical Director/Representative Date: 06/09/14

INORGANICS
&
MISCELLANEOUS

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1412197
Report Date: 06/09/14

SAMPLE RESULTS

Lab ID: L1412197-01
Client ID: NIANTIC-E-1
Sample Location: Not Specified
Matrix: Water
Date Collected: 06/05/14 13:08
Date Received: 06/05/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab										
Coliform, Fecal (MF)	21000		col/100ml	1000	NA	1000	-	06/05/14 17:35	30,9222D	SE
E. Coli (MPN)	56000		MPN/100ml	500	NA	500	-	06/05/14 16:10	30,9223B	SE
ENTEROCOCCUS	48000		MPN/100ml	500	NA	500	-	06/05/14 17:10	102,ENTEROLERT	SE

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1412197
Report Date: 06/09/14

SAMPLE RESULTS

Lab ID: L1412197-02
Client ID: SWANTON-N
Sample Location: Not Specified
Matrix: Water
Date Collected: 06/05/14 13:38
Date Received: 06/05/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab										
Coliform, Fecal (MF)	34000		col/100ml	1000	NA	1000	-	06/05/14 17:35	30,9222D	SE
E. Coli (MPN)	31000		MPN/100ml	500	NA	500	-	06/05/14 16:10	30,9223B	SE
ENTEROCOCCUS	24000		MPN/100ml	10	NA	10	-	06/05/14 17:10	102,ENTEROLERT	SE

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified
Lab Number: L1412197
Report Date: 06/09/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Microbiological Analysis - Westborough Lab for sample(s): 01-02 Batch: WG695493-1										
E. Coli (MPN)	<1		MPN/100ml	1	NA	1	-	06/05/14 16:10	30,9223B	SE
Microbiological Analysis - Westborough Lab for sample(s): 01-02 Batch: WG695496-1										
ENTEROCOCCUS	<1		MPN/100ml	1	NA	1	-	06/05/14 17:10	102,ENTEROLERT	SE
Microbiological Analysis - Westborough Lab for sample(s): 01-02 Batch: WG695498-1										
Coliform, Fecal (MF)	ND		col/100ml	1.0	NA	1	-	06/05/14 17:35	30,9222D	SE

Project Name: PROVIDENCE, RI-MASHPAUG POND
Project Number: Not Specified

Lab Number: L1412197
Report Date: 06/09/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1412197-01A	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	E-COLI-QT(.25)
L1412197-01B	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	ENTRO-QT(.25)
L1412197-01C	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	F-COLI-MF(.33)
L1412197-02A	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	E-COLI-QT(.25)
L1412197-02B	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	ENTRO-QT(.25)
L1412197-02C	Bacteria Cup unpreserved	A	N/A	2.8	Y	Absent	F-COLI-MF(.33)

*Values in parentheses indicate holding time in days

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

Report Format: Data Usability Report

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

Data Qualifiers

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	PROVIDENCE, RI-MASHPAUG POND	**Lab Number:**	L1412197
Project Number:	Not Specified	**Report Date:**	06/09/14

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

102 Standard Test Method for Enterococci in Water Using Enterolert (IDEXX Defined Substrate Technology), Amercian Society of Testing & Materials, ASTM D6503-99.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised April 15, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ENVIRONMENTAL PROTECTION AGENCY

REGION 1

Serial_No:06091418:26

L1412197

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS	E.Coli by QT	Enterococcus by QT	Fecal Coliform by QT				REMARKS
	Providence, RI - Mashpaug Pond MS4								

SAMPLERS: *(Signature)*

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	6/9/14	1308		X	Mignific - E-1	3	X	X	X				
	6/9/14	1338		X	Swanton - N	3	X	X	X				

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	6/5/14 1500	6/5/14 1500			
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks	
				Call # 2050	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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